

ATTACHMENT, STRESS, AND COPING IN COLLEGE STUDENTS

BY

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I would like to dedicate this work to my husband,  
William Greenhood,  
whose unwavering support has made it possible.

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## ATTACHMENT, STRESS, AND COPING IN COLLEGE STUDENTS

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This study explored the relationship between adult attachment style and responses to self-reported stress events in college students. The study was designed to test hypotheses about the buffering effects of secure attachment and specific affect regulation strategies used by people with the preoccupied, fearful, and dismissing attachment styles. Introductory psychology students (N=1157) were prescreened using the Bartholomew and Horowitz four-category self-report measure of adult attachment. Scores on this measure were used to select 193 participants (101 women, and 92 men) in the four attachment categories. Participants wrote a narrative account of a recent stressful experience and completed the Impact of Event Scale (IES) and the Ways of Coping (Revised) (WOC) in relation to the stress event. Participants also described current levels of psychiatric symptoms on the Brief Symptom Inventory (BSI). Results generally supported hypotheses about the buffering effects of secure attachment with respect to significantly



Brief Symptom Inventory (BSI). Results generally supported hypotheses about the buffering effects of secure attachment with respect to significantly lower levels of distress on the IES intrusion scale and the BSI Global Severity Index (GSI) but not in relation to increased social support seeking on the WOC. As hypothesized, the preoccupied attachment group reported increased distress, as evidenced by significantly higher mean scores on the IES intrusion scale and the GSI of the BSI as well as elevated levels of escape avoidance responses on the WOC. As predicted, the fearful attachment group had elevated scores on the Depression scale of the BSI (significantly higher than the secure and dismissing groups, although not different from the preoccupied group). Results failed to support predictions that the dismissing group would have elevated scores on scales of avoidance (IES), distancing (WOC), or Hostility and Somatization (BSI). The relation between attachment style and measures of distress and coping was the same within each gender, but for 9 of the 20 measures, there was a significant gender effect, with women scoring higher than men in each case. Recommendations for future research included the use of alternatives to self-report to increase internal validity, particularly with regard to testing hypotheses about the dismissing attachment group. Results are discussed as supporting the utility of attachment theory in conceptualizing mental health issues, and planning interventions.

## CHAPTER 1 INTRODUCTION

Emotional well-being has often been thought to be tied to the quality of a person's close relationships. One aspect of close relationships is attachment, which is understood as the disposition to seek proximity to particular others for security and protection in times of stress. Within the last decade, attachment theory has been widely employed as a tool to understand key aspects of close relationships and their effects on socioemotional functioning throughout the life span. Developmental, clinical, and social psychologists have utilized attachment theory to direct studies in a range of areas extending far beyond the original research base which focused on the mother-infant relationship. This new wave of research was ushered in by the development of methods for assessing attachment beyond infancy. Such methods have enabled researchers to investigate how patterns of attachment can influence interpersonal and intrapersonal behaviors in people of all ages: from children's relationships with peers in preschool to satisfaction with romantic relationships in adulthood to dealing with the stresses of aging. The present study examined how attachment style may influence psychological functioning in college students. Specifically, this research tested whether attachment style was related to coping responses to everyday stressors, and to symptomatic psychological distress. A brief survey

of some of the theoretical and empirical lines leading to this study is presented below.

### An Overview of Attachment

The British psychoanalyst John Bowlby, generally recognized as the father of attachment theory, drew upon evidence from animal behavior, as well as clinical observations about responses to separation and loss, in formulating his attachment theory (Bowlby 1969, 1973, 1979, 1988). Bowlby's work argued for the importance, both in terms of evolution and in terms of individual human development, of the relationship between an infant and its caretaker (usually, but not necessarily, its mother). This attachment bond was seen as forming the basis for later close social relationships. Secure attachment was also seen ideally as providing an experience of a secure base which facilitates emotional regulation and confident exploration of the environment throughout life. In particular, a secure attachment was seen as a buffering factor that can act to reduce the negative effects of stress on a person's state of mind. In addition, secure attachment was viewed as forming the basis for positive internal models of self and others, based on the experience of others as accessible, and self as worthy of care. Bowlby was particularly concerned about the effects of early disruptions of attachment relationships and wrote extensively about both the protective effects of secure attachments (Bowlby, 1988) and the relationship between attachment disruption and anxiety, anger, and depression (Bowlby, 1969, 1973, 1979).

The Canadian psychologist Mary Ainsworth worked with Bowlby and added greatly to the literature on attachment through her development of the research paradigms that allowed for the empirical study of patterns of mother-infant attachment, its antecedents and consequences (Ainsworth, 1979; Ainsworth, Blehar, Waters, & Wall, 1978). Ainsworth observed the behavior of mothers and infants in the first twelve months, both in the home and in the laboratory Strange Situation procedure. She described three main types of attachment style, including those infants who were secure in their attachment to their mother as well as two insecure groups: those avoidant of attachment and those classified anxious-ambivalent. Secure infants expressed distress upon separation from the mother and positive greetings and proximity seeking when she returned. Interaction with the mother was calming to these infants, and they used her presence as a base for confident exploration of the environment. Infants in the avoidant group expressed little affect during separation, and ignored the mother during reunion. Infants in the anxious ambivalent group evidenced anxiety even prior to separation from the mother, expressed much distress during separation, and upon reunion combined clingy proximity-seeking behaviors with angry contact-resisting behaviors. Ainsworth also documented that infant attachment styles were correlated with specific antecedent maternal behaviors, suggesting that attachment style was indeed a product of the infant's social experience.

Ainsworth's paradigm (Ainsworth, 1979; Ainsworth, Blehar, Waters, & Wall, 1978) was enormously productive of research, which eventually

included longitudinal studies documenting that attachment assessed in infancy could predict attachment behavior and social competencies later in childhood (Grossman & Grossman, 1991; Main & Cassidy, 1988). Such studies buttressed the validity of the attachment construct as assessed with Ainsworth's procedures and Bowlby's (1988) ideas about the continuing importance of early social relationships. Research conducted by Ainsworth's colleague Mary Main included the development of an interview method of assessing attachment in parents (the Adult Attachment Interview) which could be used to predict the attachment style of their infants (Main & Goldwyn, 1985; Main, Kaplan, & Cassidy, 1985). Like the infant classification system, this adult classification system used three categories of attachment, which were called secure/autonomous (characteristic of parents of secure infants), dismissing of attachment (characteristic of parents of avoidant infants) and preoccupied with attachment (characteristic of parents of anxious-ambivalent infants).

The research by Main and her colleagues (Main & Goldwyn, 1985; Main, Kaplan, & Cassidy, 1985) established the viability of assessing attachment in adults by assessing internal models of relationship. The subsequent intense research activity in adult attachment has been accompanied by the proliferation of measurement techniques, including dimensional, categorical, and prototype models. Many researchers have, like Main et al. (1985), adopted a categorical approach. For example, Hazan and Shaver's (1987) widely used paper and pencil instrument for assessing attachment asks respondents to describe themselves with one of three "adult

versions" of Ainsworth's three attachment categories: secure, avoidant, and anxious ambivalent.

The present study employed the Bartholomew and Horowitz (1991) framework, which assesses attachment style in terms of four categories: secure, preoccupied, fearful, and dismissing. The Bartholomew model is a prototype model, which describes four ideal types of attachment and assesses how well a particular person fits each.

Two of Bartholomew and Horowitz's (1991) prototypes (secure and preoccupied) directly parallel styles in other categorical schemes (Ainsworth, 1979; Hazan & Shaver, 1987; Main et al., 1985). People fitting the secure attachment prototype view others as accepting and responsive and themselves as lovable and worthy of care. They are comfortable with closeness and able to discuss relationships freely and coherently. The preoccupied attachment prototype corresponds to the anxious-ambivalent classification of Ainsworth (1979) or Hazan and Shaver (1987) and to the preoccupied classification in the Main et al. system (1985). People with this style tend to have a negative view of self and positive view of others. There is an overinvolvement in close relationships, a dependence on other people's acceptance for a sense of personal well-being, and incoherence and exaggerated emotionality in discussing relationships.

Bartholomew and Horowitz (1991) subdivided the avoidant group of three-category models into a fearful avoidant group and a dismissing avoidant group, on the basis that "a single avoidant-detached group may obscure conceptually separable patterns of avoidance in adulthood" (p. 227).

People with the fearful avoidant style have internal models of others as rejecting and unresponsive to bids for attachment, and of self as unworthy and unlovable. There is an avoidance of close relationships prompted by a fear of rejection and distrust of others. People with the dismissing avoidant style may also have experienced a rejection of their bids for attachment and experience others as untrustworthy and inaccessible. However, they have a positive view of self and maintain a sense of independence and invulnerability. They protect themselves from disappointment by avoiding close relationships, and devaluing their importance.

Research on the construct validity of the four category model is thorough and extensive (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994a, 1994b) and this, along with the potentially useful distinction between the two types of avoidant attachment (dismissing and fearful), formed the basis for choosing this attachment scheme. Chapter 2 will include a more in-depth review of the research on attachment, its correlates, and how it is related to other personality constructs.

### Attachment Style and Responses to Stress

The study of attachment is inextricably tied to the experience of stress. In adulthood as in infancy, people are expected to seek out particular others for support and comfort primarily in times of stress. Therefore, the experience of stress should activate internal models of attachment and elicit attachment behavior. Likewise, the nature of a person's attachment history, and the current state of internal models of attachment, would be expected to influence how that person negotiates a stressful experience. Bowlby (1988)

was explicit about the relationship between attachment and resilience to stress: "my hypothesis is that the pathway followed by each developing individual and the extent to which he or she becomes resilient to stressful life events is determined to a very significant degree by the pattern of attachment he or she develops during the early years" (p. 172).

Closely related to the stress-buffering hypothesis is the idea that different attachment styles are related to different modes of regulating affect in stressful contexts. This affect regulation hypothesis has been proposed by the attachment researcher Roger Kobak (Kobak & Sceery, 1988; Kobak, Sudler, & Gamble, 1991). According to Kobak, secure attachment is characterized by the ability to acknowledge distress and the need for support in stressful contexts, whereas avoidant attachment is characterized by the inability to acknowledge either distress or the need for comfort and support, and ambivalent attachment is characterized by direction of attention toward attachment and distress.

A number of studies using dimensional or three-category models of attachment have found a relationship between attachment style and responses to stress (Armsden & Greenberg, 1987; Mikulincer, Florian, & Weller, 1993), offering empirical support for the stress buffering and affect regulation theories of attachment. These studies, as well as others linking attachment style and psychopathology, will be presented in Chapter 2.

The present study derived its hypotheses from the stress buffering and affect regulation tenets of attachment theory and seeks to replicate and extend previous research in this area, using the Bartholomew and Horowitz



(1991) model. If secure attachment does buffer life stresses, and facilitate handling of distressing affect, then it is reasonable to hypothesize that secure attachment would be associated with less distress and more adaptive coping (for instance, more support seeking) following a stress event and, over time, with fewer psychological "symptoms." In addition, the varieties of insecure attachment, because they involve different "rules" for affect regulation, would be expected to be associated with qualitatively different kinds of distress, coping, and symptomatology. For example, the preoccupied attachment style should be associated with the expression of high levels of anxiety and general distress. On the other hand, the dismissing attachment style should be associated with a minimization of distress but increased hostility, denial, and avoidance of the stressor. The fearful attachment style would be expected to be associated with the negative self-cognitions associated with depression.

The present study aimed to assess the ability of the Bartholomew and Horowitz (1991) attachment styles to predict responses to everyday stress in a relatively high functioning and nonclinical group of adolescents. In order to accomplish this, the study looked at several aspects of stress responses and symptomatology that have been useful in understanding the behavior and adjustment of both normal and clinical groups. The measures included a measure of the emotional impact of the stressor, a measure of coping, and a measure of overall psychiatric symptomatology.

### Overview

Bowlby (1988) saw attachment theory as having many important applications to mental health practice with implications for the

understanding of symptoms, for establishing the focus of treatment interventions, for dealing with the therapeutic relationship, and for establishing prevention programs. Bowlby appreciated the need for empirical testing of his ideas about personality development and about the relevance of attachment to mental health if attachment theory were to fulfill its promise. He viewed this task as "an enormous program of research and one that will clearly require generations of research workers" (p. 178). Judging by the volume, breadth, and depth of research in this area, this "enormous program" has had a productive beginning. Building on this accumulating body of knowledge, the present study represents an attempt to further explore relationships between attachment style and stress resilience. The following chapter consists of a review of the literature relevant to this study.

## CHAPTER 2

### REVIEW OF THE LITERATURE

The purpose of this chapter is to review the literature on attachment and its relation to psychological distress in order to clarify the derivation of the research hypotheses. This chapter is divided into four parts. Part one deals with the evolution of attachment theory and attempts to provide a meaningful historical context for the study of adult attachment. Part two focuses on the assessment of adult attachment. Part three reviews specific studies related to attachment, coping, distress, and symptomatology. Part four translates the central concerns of this study into research hypotheses.

#### Attachment Background

##### John Bowlby

Bowlby's theory of attachment evolved in part out of his experience as a practicing psychoanalyst working with children and families, which stimulated his interest in the effects of maternal deprivation and early separations and losses on later mental health. His interest in these issues is reflected in his early writings. For instance, in 1944 he published a study, called Forty Juvenile Thieves, of forty "affectionless" boys accused of stealing and reported a much higher prevalence of maternal deprivation and neglect in the lives of these boys compared with controls. In 1951 Bowlby issued a report to the World Health Organization, published as Maternal Care and

Mental Health (Bowlby, 1951), that reviewed what was known of the effects on children of institutional care and other forms of maternal separation, deprivation, and loss. Bowlby came to believe that actual social experiences, and particularly experiences in the first social relationship, that between an infant and its mother, had a tremendous influence on later personality functioning and mental health.

Bowlby was dissatisfied with psychoanalytic explanations for the profound effects of variations in early parental care (Bretherton, 1992). In his quest for a framework that better fit his observations, he was influenced by the emerging science of ethology. He read Lorenz's account of following in geese, which "suggested that social bond formation need not be tied to feeding" (Bretherton, 1992, p. 762). Bowlby's developing theory was also influenced by Harlow's studies documenting the effects of maternal deprivation on the development of rhesus monkeys (Harlow, 1958; Harlow & Zimmerman, 1959). Bowlby subscribed to the view of ethology that attachment behaviors have their roots in evolution, that the biological function of attachment is protection, and that patterns of attachment in humans have much in common with patterns in closely related species, especially nonhuman primates.<sup>1</sup>

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<sup>1</sup>Contemporary research from an ethological perspective continues to explore attachment in nonhuman primates and to assess the effects of variations of early rearing environments on social behavior, autonomic activity, and stress resilience (Reite & Boccia, 1994; Rosenblum & Paully, 1991).

Bowlby's theory is most fully elaborated in his attachment trilogy, which was published rather late in his career: Attachment in 1969; Separation in 1973; and Loss in 1980. In these volumes he further explores the functions of the attachment system, its relationship to other behavioral systems, and to mental health. It is beyond the scope of this paper to summarize this work, but two aspects, internal models and the life-span nature of attachment, will be briefly addressed.

In explaining how early attachment experiences may come to play such an important part in later functioning, Bowlby (1988) discussed how experiences with caregivers are internalized in the form of internal models, or cognitive schemas of relationship that organize subsequent behavior and that tend to be self-perpetuating. These internal models would include models of the self, of others, and of the accessibility of others in times of stress. Bowlby thought that defensive processes played an important role in the expression of attachment behavior and the construction of internal models. He particularly thought that children whose attachment needs were ignored might appear to be detached, apparently unconcerned about the availability of others, while in reality they were suppressing painful awareness of attachment needs through a process he called "defensive exclusion" (p. 33).

Bowlby (1988) also believed that attachment needs, and the intense affect associated with them, were important, not only in infancy but throughout the life span. He stated, "One further point about attachment behavior I wish to emphasize is that it is a characteristic of human nature

throughout our lives--from the cradle to the grave" (p. 82).<sup>2</sup> While attachment experiences during the period of infancy were seen as having particular importance in development, Bowlby believed that attachment behavior and internal models continued to develop throughout childhood and adolescence and were susceptible to change even in adulthood. At the same

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<sup>2</sup>Attachment theory viewed attachment concerns as being important throughout the life span, in Bowlby's words "from the cradle to the grave" (Bowlby, 1988, p. 82). Ainsworth agreed. In a paper entitled "Attachments Beyond Infancy," Ainsworth discussed the importance of studying the normative changes in the attachment of children to their parents throughout adolescence and adulthood, as well as the bonds of parents to their children, sexual pair bonds, attachment to friends and other intimates, and bonds with siblings and other kin (Ainsworth, 1989). While evidence that the attachment construct is relevant to adults at different ages is accumulating, specific studies of normative changes at different life stages are just beginning (see Hazan & Zeifman, 1994, and Levitt, 1991, for examples of this type of research).

The question of how much continuity exists in attachment across the life span, and what experiences may be associated with change, is far from answered. For instance, Grossman and Grossman (1991) have reported impressive continuity in attachment from infancy through age 10 and state: "We have experienced shock and disbelief in students and colleagues to whom we reported our stability and concordance data. To date, we have only tentative answers to the question why the stability exists. Bowlby suggested that the spiral of never-tested expectancies and the mechanisms of self-fulfilling prophecies serve to increase the stability of inner working models" (Grossman & Grossman, 1991, p. 110). While studies of adults have shown consistency of retrospective accounts with adult working models of relationship, at present there is no longitudinal data available on continuities in attachment from infancy through adolescence and adulthood.

It should be noted that the usefulness of studying attachment in adults does not depend upon continuity of adult styles with those in infancy, as long as attachment variables are useful in predicting concurrent behavior. Since the present study assessed attachment in late adolescents, it is appropriate to ask what is known about attachment for this age group. Studies of attachment in adolescents have consistently found that attachments to both parents and peers are important and are positively correlated with each other (Armsden & Greenberg, 1987; Griffin & Bartholomew; Seiffge-Krenke, 1995). Thus, while longitudinal evidence for continuity of attachment from infancy to adolescence is not yet available, there are data supporting the salience of individual differences in attachment for this age group.

time, he was impressed with the self-perpetuating nature of internal models of relationship and with the potential for parents to transmit maladaptive attachment models to their children.

Bowlby's (1969, 1973, 1979, 1988) theory of attachment diverged in several important respects from Freudian psychoanalytic theory. One difference was that attachment theory recognized a biological basis for a strong social bond that was independent of the need for food or sex. Also, compared to Freudian theory, Bowlby put much more emphasis on the importance of real-life events (such as the adequacy of parenting experiences, and the occurrence of separations and losses) in personality development. Finally, Bowlby's attachment theory reframed notions about dependency, considered by Freudian theory to be regressive in adults. Bowlby regarded attachment behavior as normal, universal, and adaptive in adults throughout the life span. He stated:

Nor is the urgent desire for comfort and support in adversity regarded as childish, as dependency theory implies. Instead, the capacity to make bonds with other individuals, sometimes in the careseeking role and sometimes in the caregiving one, is regarded as a principal feature of effective personality functioning and mental health. (Bowlby, 1988, p. 163)

While viewing attachment as being rooted in the biology of the species, Bowlby (1988) recognized the continual interplay between the individual and environmental events and was particularly interested in empirical study of real-life events that affected the development and expression of attachment behavior in a given person. In this effort, Bowlby established a productive collaboration with the Canadian clinical psychologist, Mary D. S. Ainsworth.

### Mary D. S. Ainsworth

Prior to working with Bowlby at the Tavistock clinic, Ainsworth had studied security as a dimension of personality (Ainsworth & Bowlby, 1991). Ainsworth coined the phrase secure base to describe how a healthy attachment relationship facilitates exploration and adaptation. Secure base behavior refers to a prototypical pattern of behavior in which the infant seeks proximity to the mother in times of stress, experiences felt security in this relationship, and is soothed and prepared to venture out again to explore the environment. In this way, the secure base of the attachment relationship simultaneously supports both protection and exploration. The concept of the secure base has become central to attachment theory's model of healthy psychological functioning and is the title given by Bowlby to a collection of his lectures on attachment and mental health issues (Bowlby, 1988).

The contribution for which Ainsworth is best known is her observational studies of the mother-infant relationship during the first year of life (Ainsworth, Blehar, Waters, & Wall, 1978). These consisted of extensive naturalistic observations of the mother and infant in the home environment as well as responses in the Strange Situation procedure. In the Strange Situation, the infant and mother are observed in a novel environment in successive episodes including preseparation, separation, the appearance of a stranger, and reunion with the mother. From her research, Ainsworth derived a typology of individual differences in attachment behavior which has proved very useful in understanding mother-infant relationships. The eight patterns Ainsworth described were grouped into



three main types. These included those secure in their attachment to the mother (averaging around 60% of attachment relationships), as well as two insecure groups: those avoidant of attachment (around 25%) and those classified anxious-ambivalent (around 15%).

The groups differed in how they used the relationship with the mother to negotiate the stress of the Strange Situation. The infants in the secure group used their mothers as a secure base for exploration in the preseparation phase and showed substantial distress during the separation phase. In the reunion phase, secure infants sought proximity to and interaction with their mothers, and this interaction was effective in reducing their distress. Infants in the avoidant group showed little crying during separation and instead busied themselves with playing with toys. They avoided the mother during the reunion phase, scarcely acknowledging her presence. Infants in the anxious-ambivalent group showed signs of anxiety even during the preseparation episodes, were very distressed during the separation episode, and upon reunion could not be comforted but sought proximity at the same time as expressing anger toward the mother (Ainsworth et al., 1978).

In her analysis, Ainsworth (1979) described the secure infants as more cooperative than the insecure groups and both insecure groups (particularly the avoidant group) as more angry than infants in the secure group. Ainsworth also recognized a defensive aspect of the attachment behavior of avoidant infants, who experience a conflict between the desire for proximity and the anticipation of rejection, and stated, "Avoidance is viewed as a

defensive maneuver, lessening the anxiety and anger experienced in the conflict situation and enabling the baby nevertheless to remain within a tolerable range of proximity to the mother" (p. 933).

Ainsworth reported that the differences in infant attachment in the Strange Situation were associated with differences in maternal behavior in the home (Ainsworth, 1979; Ainsworth et al., 1978). Mothers of secure infants were described as sensitive and responsive, alert to their infants' distress signals, accessible, and able to respond appropriately. Mothers of avoidant infants were described as being uncomfortable with physical contact with their infants, more rejecting, more often angry, and more restricted in expression of affect. Mothers of anxious-ambivalent infants were described as inconsistently responsive to their infants' signals and sometimes intrusive but as less overtly rejecting of physical contact than mothers of avoidant infants.

Overall, the research of Ainsworth et al. (1978) demonstrated that attachment in infancy could be reliably assessed, that it was stable over time, and that it was associated with specific maternal behaviors observed in home and laboratory. Ainsworth's original research focused primarily on attachment in the first year of life. However, subsequent longitudinal research indicated that attachment status assessed at one year of age could be used to predict a child's social behaviors, both with the mother and with peers, at later ages. For instance, Matas, Arend, and Sroufe (1978) found that attachment in infancy could be related to social competencies and positive affect at 24 months. Main et al. (1985), and Cassidy (1988) and

Main and Cassidy (1988) reported findings indicating that verbal responses of six year olds to visual and verbal stimuli representing separations, as well as representational drawings of their families, were related to attachment assessed in infancy. Similarly, the same authors reported that attachment behavior with the mother assessed at age 6 was related both to attachment in infancy and to concurrent socio-emotional functioning. Evidence that attachment assessed in infancy can predict behavior later in childhood is compelling and has enhanced perception of the validity of the attachment construct and its assessment.

### Assessing Adult Attachment

Much of the research beyond infancy has retained an emphasis on patterns of individual differences which are, for the most part, very similar to those described by Ainsworth et al. (1978). However, the move to assessment of attachment in later childhood and ultimately in adults involved a shift in the behavior used as the basis of assessment. Whereas in infancy observations were primarily behavioral and observational, assessment beyond infancy has entailed eliciting cognitive representations of internal models of relationships.

Such a progression is wholly consistent with Bowlby's (1969, 1973, 1979, 1988) original formulation of attachment theory, which viewed internal models of relationship as guiding a person's close relationships. According to this theory, a child internalizes working models of experiences with its caretakers, developing a cognitive schema of the caretaker and of self in relation to the caretaker. Such cognitive models are viewed as enduring,

self-perpetuating mechanisms that organize and direct interpersonal attention, perception, and behavior.<sup>3</sup> A watershed paper by Main et al. (1985) entitled "Security in Infancy, Childhood, and Adulthood: A Move to the Level of Representation" described the theoretical and empirical justifications for the shift in focus from behavior to representations. A wide variety of methods, including both interview and self-report, have evolved for gathering information about aspects of a person's internal model of self in relation to attachment. These include the Adult Attachment Interview devised by Main and her colleagues (George, Kaplan, & Main, 1985; Main & Goldwyn, 1985) and the self-report measures of Hazan and Shaver (1987) and of Bartholomew and Horowitz (1991).

#### The Adult Attachment Interview (AAI)

The Adult Attachment Interview consists of a semi-structured standardized interpersonal interview in which the interviewee is asked to recall early memories of parents, and of attachment-related events, and to

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<sup>3</sup>While the study of attachment originated in the study of a dyadic relationship, it has increasingly come to be conceptualized as a personality variable, or a characteristic of an individual rather than of a relationship. The appropriateness of this shift has been a topic of debate in the attachment literature. On the one hand, attachment theory suggests that a person's internal models of attachment may serve to promote consistency in behaviors across time and situations. On the other hand there are those who argue that attachment quality should always be regarded as a characteristic of a relationship (Kobak, 1994). Proponents of this view point to the empirical evidence that a child's attachment to one parent may be secure and to the other parent insecure, depending on each parent's behavior with the infant (Main et al., 1985). It is beyond the scope of this paper to explore this controversy. However, it is important to keep in mind that assigning a person to a single attachment type may obscure variability across contexts.

comment on the effects these experiences may have had on their personalities as adults (Main et al., 1985). The interview is recorded, transcribed verbatim, and is scored by trained judges. Assignment to the attachment categories is based less on whether the person reports favorable or unfavorable experiences and more on such factors as whether the person has easy access to affective memories and the coherence of the narrative, that is, how well the person is able to integrate the experiences they report. In describing the basis of inferring attachment classification, Main et al. talk about the person's state of mind in relation to attachment and make reference to the importance of metacognitive monitoring or the ability of the person to reflect on their experiences with attachment and what influence these experiences may have had on their adult personalities.

From the Adult Attachment Interview, Main et al. (1985) described three categories, analogous to Ainsworth's three categories of infant attachment: secure-autonomous with respect to attachment; dismissing of attachment; and preoccupied by past attachments. Those classified as secure typically are able to remember and express easily early experiences with disappointment and loss that involved their parents and to integrate experiences into a coherent whole. They tend to have positive perceptions of others and to value attachment. People with a dismissing attachment style typically have difficulty remembering attachment related experiences and to discount the importance of such experiences. Dismissing persons also are likely to describe very negative interactions with parents without attempting to integrate these experiences with idealized parental representations.

People classified as preoccupied tend to be very expressive but incoherent within the Adult Attachment Interview. They are preoccupied with dependency on their own parents and still struggle to please them.

Much of the research using the Adult Attachment Interview has been longitudinal in design and has involved assessing attachment in parents and their children and tracing the development of attachment and social relationships over time. In one study, the attachment style of the mother was assessed with the Adult Attachment Interview during pregnancy, and was found to predict maternal behavior during the first year and infant attachment status at one year of age (Fonagy, Steele, & Steele, 1991; Steele & Steele, 1994). Thus, this study was able to demonstrate crossgenerational transmission of attachment patterns, an important aspect of attachment theory.

Collection of information about both infants and mothers also allowed Main and Hesse (1990) to describe an additional pattern of infant attachment behavior and relate it to maternal states of mind in relation to attachment. In infants assessed with the Strange Situation, there was a residual "D" category of infants who appeared to be unclassifiable, that is, their behavior did not fit any of the three defined strategies (Main & Hesse, 1990). They might approach the parent with head averted or rise to greet the parent upon reunion and then fall prone to the floor. Main and Hesse found that there was an association between parents' experience of unresolved loss of attachment figure, unresolved abuse, or other recent unresolved traumatic experience and infant's "D" classification. They characterized the behavior

of "D" infants as inhibiting an attachment sequence as the result of apprehension and speculated that both frightened and frightening parental behavior may contribute to the infant's fear and ambivalence about approach. Main and Hesse's description of this "D" pattern of infant attachment has influenced conceptualizations of adult as well as infant attachment patterns (Ainsworth & Eichberg, 1991; Brennan, Shaver, & Tobey, 1991; Kuncé & Shaver, 1994).

Main's Adult Attachment Interview methodology (Main & Goldwyn, 1985) has been very productive in increasing understanding of infant attachment behavior, adult working models related to attachment, and the relationships between the two and has been applied in studies of adolescent and adult functioning and psychopathology as well (Cassidy & Berlin, 1994; Dozier & Kobak, 1992; Dozier & Lee, 1995; Fonagy et al., 1991; Kobak, 1991; Kobak & Duemmler, 1994; Kobak & Sceery, 1988; Patrick, Hobson, Castle, Howard, & Maughan, 1994; Pearson, Cohn, Cowan, & Cowan, 1994). This particular interview method requires extensive training, and for this reason it has been employed primarily by Main and her colleagues.

Self-report methods have also been used to assess attachment in adults and have produced their own worthy body of research. Some researchers have focused on identification of attachment figures and the quality of particular relationships (Levitt, 1991). Others have investigated security as a dimension of particular attachment relationships (Armsden & Greenberg, 1987; Cummings, 1990; Valaík-Barnas, Pollina, & Cummings, 1991). However, by far the most widely used have been the categorical measures of

adult attachment, which use self-report instruments to classify respondents in terms of adult versions of the Ainsworth attachment classifications.

### Hazan and Shaver's Typology.

The first of these to appear in the literature was a three-category measure developed by social psychologists Cindy Hazan and Phillip Shaver (1987) in an innovative research program seeking to relate adult attachment to functioning in romantic relationships.<sup>4</sup> Hazan and Shaver created short paragraphs descriptive of the secure, avoidant, and anxious-ambivalent attachment styles and asked respondents to classify themselves according to the paragraph which was most descriptive of them. Hazan and Shaver's (1987) research found that, across genders, the proportions of adults who classify themselves in the three categories is similar to the proportions in studies of infants (56% secure; 25% avoidant; 19% anxious-ambivalent).<sup>5</sup>

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<sup>4</sup>Hazan and Shaver (1987) viewed adult romantic functioning as reflecting three interrelated behavioral systems, including the caregiving system (Kunce & Shaver, 1994) and the sexual mating system (Hazan & Zeifman, 1994) as well as adult attachment.

<sup>5</sup>Given the existence of gender stereotypes about interpersonal behavior and parallels between the attachment types and these stereotypes, one might expect to see dramatic gender differences in measures of attachment. However, this has not generally been the case. Studies of attachment in infancy generally have not found gender differences in the Ainsworth attachment classifications (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983). Studies of adults using the Hazan and Shaver measure have also failed to find gender differences, and this has been interpreted as "lending support to Bowlby's claim that all human beings have an inborn need for felt security." (Hazan & Shaver, 1994, p. 17). However, some studies of attachment in adults have reported gender differences. For instance, using the Adult Attachment Interview, Kobak & Sceery (1988) reported a predominance of women within the preoccupied attachment category. Bartholomew reported higher frequencies of men in the dismissing category



This result has been replicated in subsequent studies using their measure with a variety of populations (Shaver & Hazan, 1993, p. 36). They also found expected differences among the three groups in mental models, as indicated by differences in attitudes toward love relationships and different experiences with parents. Secure individuals reported more positive experiences in love relationships and more positive experiences with parents and between parents. This initial study demonstrated the feasibility of studying adult attachment with a simple self-report measure. Further research has replicated and extended these findings (for a review, see Rothbard & Shaver, 1994, or Shaver & Hazan, 1993). A growing body of research with the measure testifies to its ability to make meaningful distinctions among people that relate to relationship functioning, work

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and of women in the fearful category (Bartholomew & Horowitz, 1991). Brennan et al. (1991) reported on data from a sample of college students who responded to both the Hazan and Shaver (1987) and Bartholomew and Horowitz (1991) instruments. Consistent with previous studies, they found that there were no gender differences on the Hazan and Shaver measure. However, they did find differences on the Bartholomew measure, notably in slightly higher proportions of males in the dismissing category and of females in the fearful category. They stated that in the Hazan and Shaver system "Important gender differences may have been hidden within an overly broad avoidant category" (Brennan et al., 1991, p. 456). Corroborating this finding, Carnelly, Pietromonaco, & Jaffe (1994) reported that in their sample very few women endorsed the dismissing category on Bartholomew's measure.

In sum, there is some evidence that, in adults, there may be gender differences in attachment styles which are in line with cultural stereotypes. However, overall, gender differences in attachment have been small and seem to vary with the particular population sampled and the particular instrument used to measure attachment. Using the Bartholomew and Horowitz measure, there may tend to be slightly more males in the dismissing category and females in the fearful category.

functioning, parental relationships, affect regulation, responses to stress, and self-disclosure. Periodic reviews of this body of research have aided in integrating these empirical findings with attachment theory (Hazan & Shaver, 1994; Kuncie & Shaver, 1994; Rothbard & Shaver, 1994; Shaver & Hazan, 1993).

#### Bartholomew and Horowitz's Model

The model of attachment adopted for use in this study, that of Kim Bartholomew and Leonard Horowitz (1991), conceptualizes adult attachment in terms of four, rather than three, prototypes. Bartholomew and Horowitz's (1991) secure and preoccupied groups are essentially identical to Hazan and Shaver's secure and anxious-ambivalent groups, respectively. However, the avoidant group of three-category models is subdivided into two distinct types of insecure avoidant behavior, dismissing avoidant and fearful avoidant. Bartholomew and Horowitz felt that the avoidant category of three category models might obscure differences between people who valued close relationships but avoided them out of fear (fearful avoidants) and those who defensively downplayed the importance of relationships (dismissing avoidants). A four-category model is also more consistent with both Bowlby's theoretical statements about the importance of models of self and others in internal models of attachment and with Horowitz's interpersonal approach to dynamic psychotherapy.

Starting from Bowlby's theoretical assertion that attachment relations determine an individual's feelings about the self and others, Bartholomew

and Horowitz (1991) argued that there should be four attachment types. These four types were derived from a 2 X 2 matrix crossing positive and negative models of self with positive and negative models of others. The secure prototype is characterized by positive models of both self and others. The preoccupied prototype is characterized by a positive model of others and negative model of self. People fitting the dismissing prototype possess a positive model of self and negative model of others, and people fitting the fearful prototype have negative models of both self and other. Using a combination of self-report, interview, and friend report methods, Bartholomew and Horowitz (1991) have presented evidence validating their model and its underlying dimensions of self and others (Griffin & Bartholomew, 1994a, 1994b). For instance, they have shown that people with attachment prototypes with a positive model of self (secure and dismissing) have higher self-esteem, and that positive models of others (secure and preoccupied) are associated with a positive interpersonal orientation (Griffin & Bartholomew, 1994b).

The Bartholomew and Horowitz (1991) model of attachment was developed within the context of interpersonal theory and interpersonal psychotherapy and has the advantage of potentially serving as a bridge to these areas. For instance, Horowitz, Rosenberg, and Bartholomew (1993) reported on a study which related the four attachment styles to a measure of distress due to different types of interpersonal problems and to outcome in brief dynamic psychotherapy. People with a secure attachment style tended to have more problems related to warmth and exploitability. On the other

hand, people with a preoccupied style tended to have problems in being overly expressive, competitive, and autocratic. The problems of people with a dismissing avoidant style tended to be related to coldness, and for those with a fearful avoidant attachment style, problems tended to be related to social inhibition and introversion.

Other researchers have evaluated Bartholomew's four category model and have generally found it valuable on theoretical and empirical grounds. For instance, Rothbard and Shaver (1994) stated that

Bartholomew has provided compelling evidence that her four-category conceptualization is related to theory-relevant personality variables and is perhaps more compatible with adult interpersonal experiences than is Hazan and Shaver's three-category scheme. (Rothbard & Shaver, 1994, p. 56)

Similarly, Feeney, Noller, and Hanrahan (1994) reported on a cluster analysis of items drawn from a variety of attachment measures, and concluded that

In terms of Bartholomew's (1990) model, these results tend to provide strong support for the existence of four rather than three groups. . . . The clusters derived also provide considerable support for the actual groups hypothesized in Bartholomew's model. (Feeney et al., 1994, p. 142)

In addition, Feeney et al. found that the cluster corresponding to Bartholomew and Horowitz's (1991) fearful prototype was characterized by very high levels of insecurity, and they and others (Brennan et al., 1991; Kuncie & Shaver, 1994) have hypothesized that this group might correspond to an adult version of the "D" group described by Main and Hesse (1990).

Thus, the four-category model seems to offer several advantages. It is consistent with empirical findings in infant and adult attachment literature;

it has potential for integration with interpersonal psychotherapy; it includes Bowlby's (1988) focus on models of self and others in a systematic way, and, at the same time, it is sufficiently similar to Hazan and Shaver's (1987) three-category model to allow comparisons with results of research using that model (Kunze & Shaver, 1994).

The Bartholomew and Horowitz (1991) model is a prototype model; that is, it describes four ideal kinds of attachment style and assesses a person's goodness of fit to each of the prototypes. A person is then assigned to the best-fitting of the four prototypes. A variety of methods have been used to assign the person to a prototype, including judges' ratings of taped interviews and self-report methods. A summary of the characteristic attachment style for each prototype, taken from one of the Bartholomew self-report attachment measures, is given below:

**Secure:** It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

**Preoccupied:** I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

**Fearful:** I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

**Dismissing:** I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me. (Griffin & Bartholomew, 1994, p. 50)

In conceptualizing any individual difference variable, it is important to define the behavioral domain where it can be applied usefully (i.e., its focus of convenience) and how it may be similar or different from related constructs (i.e., its convergent and discriminant validity). Attachment theory is basically a theory of close relationships that recognizes the centrality of interpersonal processes to psychological distress. According to Ainsworth and Bowlby (1991), "Focusing on intimate interpersonal relations, attachment theory does not aspire to address all aspects of personality development" (Ainsworth & Bowlby, 1991, p. 34). Not only does attachment security strongly and consistently predict satisfaction in close relationships (Carnelly et al., 1994; Feeney & Noller, 1990; Griffin & Bartholomew, 1994; Hazan & Shaver, 1987; Simpson, 1990) but attachment has also been shown to predict a variety of other behaviors within the domain of close relationships, including such theory-relevant variables as parenting behavior (Fonagy et al., 1991; Pearson, Cohn, Cowan, & Cowan, 1994) and caregiving in adult relationships (Kunce & Shaver, 1994).

Griffin and Bartholomew (1994) have compared the four category attachment model with personality dimensions of the five-factor model of personality (Costa & McCrae, 1985). While they reported some correspondence between the self and other dimensions of the four category model and scales of the five-factor model, they reported that "none of the Big Five scales captures the element of comfort with intimacy that is the marker of a positive model of others" (Griffin & Bartholomew, 1994, p. 35). They also found that variance not explained by the five-factor model was related to

theory relevant variables, such as dependency. In addition, they reported that "even after the five fundamental dimensions of personality were accounted for, we found that prototype measures still added predictive and interpretational power to the dimensions" (p. 46). The authors interpreted these results as indicating that their measure of attachment predicts aspects of relationship functioning not accounted for by the five-factor model and that the use of prototypes adds information not contained in underlying dimensions.

#### Attachment Style and the Stress Buffering Hypothesis: Theory and Research

The study of attachment has had, from its inception, close ties to the study of stress. One of Bowlby's (1988) central hypotheses was his stress buffering hypothesis, i.e., the hypothesis that the quality of an individual's attachments determines that person's "future resilience or vulnerability to life's hazards as well as the extent to which he or she will be able to enjoy life" (p. 173). Jeffrey Simpson has written extensively about the relationship between attachment behavior and stress (Simpson & Rholes, 1994; Simpson, Rholes, & Nelligan, 1992) and emphasized the role of stress as a stimulus that activates the attachment behavioral system and elicits internal models of attachment. Simpson stated that "attachment styles primarily serve to regulate how individuals interpret, understand, and cope with negative emotional experiences during stressful situations" (Simpson et al., 1992, p. 443). Thus, it is within stressful encounters that attachment behaviors are most likely to be observed and differences among individuals are likely to be

seen. Likewise, attachment behaviors are seen as an important determinant of how effectively a person deals with stress.

The affect-regulation hypothesis of Roger Kobak (Kobak & Sceery, 1988) is closely related to the stress buffering hypothesis but offers specific descriptions of the distinctive strategies for dealing with stress-related distress that characterize each attachment style. Kobak articulated his theory as follows:

If attachment organization is to be conceived as coherent across developmental transformations and assessment contexts, there is considerable need to specify its invariant aspects. One possible approach to this issue is to view attachment theory as a theory of affect regulation. From this perspective, different patterns of attachment can be understood in terms of rules that guide individuals' responses to emotionally distressing or challenging situations. For example, secure attachment would be organized by rules that allow acknowledgment of distress and the associated attachment attempts to seek comfort and support, avoidant attachment by rules that restrict acknowledgment of distress and the associated attachment attempts to seek comfort and support, and ambivalent attachment by rules that direct attention toward distress and attachment figures in a hypervigilant manner that inhibits the development of autonomy and self-confidence. Attachment theory and research include the hypothesis that these rules for regulating distress-related affect evolve in the context of parental responsiveness to the child's signals of distress. Thus, the individual's working models of attachment figures are assumed to be closely linked to concurrent rules for regulating distress. (Kobak, Sudler, & Gamble, 1991, p. 464)

Kobak refers to the distinction between the two insecure groups as reflecting a difference in hyperactivating strategies (of anxious-ambivalents) that magnify distress, versus deactivating strategies (of avoidants) that minimize distress. Empirical research has tended to support the stress buffering hypothesis and to some extent the specific styles of affect regulation described by Kobak.



Armsden and Greenberg (1987) used a self-report instrument, the Inventory of Parent and Peer Attachment, to assess attachment security with each parent and with peers in a group of late adolescents. Their results showed that attachment security was significantly related to psychological well-being but only among those who reported significant life stressors during the previous year. Parent and peer attachment were positively correlated but only parental attachment was significantly related to psychological well-being. The authors interpreted their results as supporting the stress-buffering function of secure attachment as well as documenting the continued importance of parental attachment for adolescents.

Mikulincer, Florian, and Weller (1993) investigated the effects of attachment style on several measures of response to a specific stressor, SCUD missile attacks in Israel during the Gulf War. Part of their sample of college student participants lived in a dangerous region close to targeted areas, whereas another group lived in a less dangerous area. Using a Hebrew translation of the Hazan and Shaver (1987) attachment measure, Mikulincer et al. (1993) found that those with a secure attachment style reported lower levels of distress and symptomatology than did people with an avoidant or anxious-ambivalent attachment style. However, there was an interaction between dangerousness and attachment style such that, for several scales, the effects of attachment were significant only in the dangerous area. They also reported evidence for Kobak's affect regulation hypothesis in that they found people with an anxious ambivalent attachment style to have elevated scores across the gamut of distress measures, whereas

avoidant subjects had elevated scores only on measures of somatization, hostility, and avoidance. The authors interpreted these results as supporting the idea that high stress elicits attachment behavior, accentuating differences among the attachment groups, and that secure attachment attenuates the negative effects of stress.

In a study of first-year college students, Kobak and Sceery (1988) assessed attachment style with the Adult Attachment Interview and related these ratings to various measures of social perception, adaptation, and distress at two points in time during the first year of college. They found strong support for lower levels of self-reported distress, friend reported anxiety and hostility, and higher ego resiliency among secure participants. There was also some tenuous support for differences between the two insecure groups. The preoccupied group was associated with high levels of self-reported distress and friend rated anxiety. On the other hand, the dismissing group was associated with higher peer-rated hostility, with increased loneliness and a low level of perceived family support (Kobak & Sceery, 1988).

Dozier and Kobak (1992) also have presented some specific evidence for the affect regulation strategies of people with deactivating styles. People with the dismissing attachment style, who use deactivating styles for regulating affect, typically downplay the importance of attachment and seem unperturbed by separations, losses, or other interpersonal difficulties. However, using continuous skin conductance measures, Dozier and Kobak (1992) were able to show that, despite their devaluing of attachment, people

using deactivating strategies showed especially high levels of physiological arousal in responding to questions about separation, rejection, and loss in the Adult Attachment Interview.

A group of Israeli researchers have reported studies relating attachment style to differences in patterns of self-disclosure and accessibility of affective memories that were predicted on the basis of the affect regulation hypothesis (Mikulincer & Nachshon, 1991; Mikulincer & Orbach, 1995). They found lower levels of anxiety, greater accessibility of affective memories, and more self-disclosure among people with a secure attachment style. People with an avoidant attachment style were found to have less access to affective memories, to engage in less self-disclosure, and to be less attracted to self-disclosure in others. People with an anxious-ambivalent style reported high levels of distress, engaged in high levels of self-disclosure, and had easy access to negative memories, and seemed to be overfocused on them.

Taken together, these studies support the hypothesis that attachment style is related to the regulation of affect, both in terms of secure attachment facilitating a constructive approach to affect (with a subsequent reduction in distress) and in terms of the specific deactivating strategies of avoidants and hyperactivating strategies of anxious-ambivalents.

### Attachment and Coping

In addition to influencing how people experience distress, it is reasonable to assume that attachment style may also affect the coping strategies which a person implements in a stressful encounter. For instance,

people with a secure attachment style, confident in the accessibility of others, might be expected to use more adaptive coping mechanisms, such as problem solving and seeking of social support. On the other hand, people with dismissing, fearful, or preoccupied attachment styles might be expected to choose coping mechanisms that involve either avoidance or an overemphasis on negative affect, which are associated with less successful coping.

The finding that social support can mitigate the negative effects of negative life events is a robust one (Brown, Bifulco, Harris, & Bridge, 1986; Cohen & Wills, 1985). Current research in social support suggests that individual differences in well-being are related to perceived social support, rather than quantitative measures of size of the social network. Further, social support researchers are coming to regard perceived social support as a personality characteristic, which reflects "the extent to which an individual is accepted, loved, and involved in relationships in which communication is open" (Sarason, Shearin, Pierce, & Sarason, 1987, p. 830). Interestingly, perceived social support is also strongly related to working models of self and working models of others (Sarason, Pierce, Shearin, Sarason, & Waltz, 1991). It seems likely that a person's perceived social support and ability to effectively use the support of others in dealing with life stresses may reflect his/her ability to form secure attachment relationships.

Simpson et al. (1992) conducted a laboratory study which assessed the effects of attachment style on support seeking and support giving in a stressful situation. Couples participated in a study in which the woman was led to believe that she would undergo a stressful psychophysiological

procedure. Attachment style of each partner was assessed with the Hazan and Shaver (1987) measure of attachment, and the couple were observed during a five minute waiting period. These authors found interactive effects of attachment style and stress on the woman's support seeking. Specifically, they found that "securely attached women in this study used their partners as a source of comfort and reassurance as their anxiety increased, whereas more avoidant women retracted from their partners both emotionally and physically" (Simpson et al., 1992, p. 443). Similarly, more secure men offered more support as their partners' anxiety increased, whereas more avoidant men did not increase support giving with partners' increased anxiety (p. 444). Thus, in an observational study involving couples dealing with a mild stressor, attachment style was able to predict both support seeking and support giving behaviors.

In the previously described study relating attachment style to responses to SCUD missile attacks, Mikulincer et al. (1993) also assessed coping strategies and were able to relate this to attachment style assessed with the Hazan and Shaver (1987) measure. They found that, independent of the dangerousness of the area, people with the ambivalent attachment style reported more emotion-focused coping than people with either the secure or the avoidant attachment style. Similarly, people with a secure attachment style reported more social support seeking than people with either the ambivalent or the avoidant attachment style. Finally, people with an avoidant attachment style reported more distancing coping strategies but only in the high stress condition of living in the more dangerous area. Thus,

not only was social support seeking associated with secure attachment style but the ambivalent and avoidant groups displayed tendencies toward coping strategies that might be characterized as activating and deactivating of distress, respectively.

### Attachment and Psychological Disorders

Attachment theorists have generally approached the study of psychological disorder from the perspective of developmental psychopathology, a view which examines pathways to psychological disorder within the context of normal development (Cummings & Cichetti, 1991; Hammen, 1992; Kobak et al., 1991 ). While insecure attachment is not itself viewed as pathological, it is seen as a risk factor for the development of a variety of maladaptive states which may, under certain conditions, lead to a diagnosable psychiatric disorder. While attachment would seem to have important applications to the study of personality disorders, and there has been some research in this area (Patrick et al., 1994), most attention has been given to linking attachment with global measures of psychiatric symptomatology, and with depression.

In line with the differences in affect regulation and coping strategies described earlier, it is not surprising that some studies have found the secure attachment style to be associated with lower levels of general psychiatric symptomatology, such as anxiety, hostility, and somatization, especially under conditions of high stress (Armsden & Greenberg, 1987; Kobak & Sceery, 1988; Mikulincer et al., 1993).

Several studies using three-category models have reported increased self-reported psychiatric symptomatology among those with the preoccupied style as compared to those with an avoidant attachment style (Dozier & Lee, 1995; Kobak & Sceery, 1988; Mikulincer et al., 1993). However, a recent study suggests that these differences may reflect differences in expressiveness and ability to acknowledge distress, rather than true differences in level of symptoms. Dozier and Lee (1995) conducted a study of people with severe mental illness. They assessed attachment with the Adult Attachment Interview, scoring the interviews on the scales of security/insecurity and deactivating/hyperactivating. Consistent with prior research (Kobak & Sceery, 1988), deactivating strategies were negatively correlated with self-reported symptoms on the BSI. However, when symptoms were assessed by clinicians, deactivating strategies were positively associated with higher symptom levels. That is, patients with deactivating strategies were perceived by clinicians as more symptomatic than those with hyperactivating strategies in the rated areas of delusions, suspiciousness, and psychotic symptoms generally. The authors concluded that "these findings suggest that, although greater preoccupation with attachment issues is associated with more acknowledgment of distress generally and symptoms specifically, greater reliance on deactivating strategies may be associated with greater symptomatology observed by others" (Dozier & Lee, 1995, p. 217).

Bowlby wrote extensively about links between early disruptions in attachment relationships and depression in childhood and later life (Bowlby, 1973, 1979). From the view of developmental psychopathology, both life stress and impaired attachment relationships are commonly seen as risk factors for the sadness, helplessness, irritability, and negative cognitions about self and other that characterize depression. Attachment theory may be particularly well suited to understanding the cognitive, life stress, and interpersonal factors involved in vulnerability to depression (Hammen, 1992). Empirical studies support the theoretical notion that increased levels of depressive symptoms are associated with insecure attachment strategies.

In one study Carnelly, Pietromonaco, and Jaffe (1994) related attachment style, assessed with a multi-item self-report measure, to depression and relationship functioning in two populations of women. In a study comparing mildly depressed and nondepressed college women, they found that both a scale reflecting preoccupied attachment and a scale reflecting fearful avoidant attachment were associated with the presence of depression. In a second study comparing married women recovering from a clinical depression with nondepressed controls, they found that only the scale reflecting the fearful avoidant style of attachment was significantly associated with depression status.

Kobak et al. (1991) tested a developmental pathways model for predicting adolescent depression. These researchers assessed attachment using the Adult Attachment Interview, deriving scores on the dimensions of



security-insecurity and dismissing-preoccupied. They found that insecure attachment was associated with depressive symptoms at each of two points in time. Their results also indicated that preoccupied strategies were associated with increased levels of depressive tendencies but only at one point in time. In addition, depressive symptoms were associated with maternal reports of teens' stressful life events. The authors concluded that "our developmental pathways model suggests that the emergence of depressive symptoms is the product of a number of interrelated processes that include insecure attachment and life stress" (p. 469).

Thus, it would seem that insecure attachment strategies may be associated with increased levels of psychiatric symptoms, including depression. The stress buffering model would suggest that this increased symptomatology may result from decreased resilience to the negative effects of stressful life events.

### Summary and Hypotheses

Overall, it would seem that there is ample evidence to support Bowlby's assertion that attachment relationships remain important throughout the life-span and that a person's internal models of attachment have important implications for coping with stress, for normal affect regulation, and for the development of psychological disorder. For psychotherapists and other helping professionals who deal with people in distress, it would seem important to be able to understand just how internal models of attachment may affect how different people respond to distress.

The present study proposed to investigate how attachment style of college students might be related to coping with stress and to levels of distress. The following specific hypotheses were made.

Hypothesis 1: The experience of distress. Attachment style is expected to be associated with how a person experiences distress following a stressful event. People with a preoccupied style are predicted to report an overall high level of symptoms and particularly of intrusive symptoms (e.g., "I had waves of strong feeling about it" or "Any reminder brought back strong feelings about it"). People with a dismissing style will report a greater number of avoidant symptoms of distress (e.g. "I tried to remove it from memory" or "My feelings about it were kind of numb"). People with a secure attachment style are predicted to experience an overall moderate level of both intrusive and avoidant symptoms.

Hypothesis 2: The response to stress. In a stressful situation, attachment style will affect the coping styles a person chooses. People with a secure attachment style are predicted to more frequently choose social support strategies (e.g., "talked to someone about how I was feeling" or "I asked a relative or friend I respected for advice"). People with a dismissing style are predicted to more frequently choose distancing coping strategies (e.g., "went on as if nothing had happened" or "tried to forget the whole thing").

Hypothesis 3: Psychological symptomatology. Overall, attachment style will affect the level of self-reported symptomatology. People with a

secure attachment style are predicted to report lower levels of symptoms than people with an insecure attachment style. People with a dismissing attachment style are predicted to report the highest levels of somatization and hostility. People with a fearful attachment style will report the highest levels of anxiety and depression. People with the preoccupied attachment style will report the highest overall level of symptoms.

## CHAPTER 3 METHODOLOGY

The purpose of this study was to investigate whether attachment style in late adolescents is related to psychological distress and coping in relation to everyday stressors. Self-reported attachment style was studied in relation to reports of intrusive and avoidant symptoms and ways of coping following a stress event. In addition, attachment was related to reports of psychiatric symptomatology. Finally, participants' written accounts of their stress experiences were rated on several variables and analyzed for attachment effects.

### Participants

Participants were introductory-level psychology students who took part in this research as a part of their course requirement. The categories of adult attachment have unequal frequencies of occurrence in the general population. In order to obtain approximately equal numbers of each attachment type, investigators prescreened students with the attachment measures at the beginning of the course and later contacted them for participation.

College students (N=1157) in the general psychology subject pool were prescreened using the Bartholomew (Griffin & Bartholomew, 1994) attachment measure (see Appendix A). This four-item measure was

embedded in a larger prescreening instrument administered to general psychology classes during the first week of the term. Students were asked to indicate, on a five-point scale (0-4), how well each of the prototypes described how they viewed themselves in relationships.

The 1157 prescreened students were classified by attachment type, according to the following procedure. Only students whose highest rated attachment style was at least one scale point higher than the next highest attachment style were considered classifiable. In other words, participants with tied high point codes (i.e., mixed types) were designated as unclassifiable, and were dropped from further analysis. Using this method, approximately one third of the students ( $N=385$ ) were unclassifiable.

Those students who were classifiable were assigned to categories based on the attachment style rated highest. Of the 772 classified students, 389 (50%) were rated as secure, 168 (22%) were classified as fearful, 119 (15%) were classified as dismissing, and 96 (13%) were classified as preoccupied. These proportions closely replicate those found in other studies of college student populations using a four-category scheme. For instance, Bartholomew and Horowitz (1991) reported the proportions of the four categories as 47% secure, 21% fearful, 18% dismissing, and 14% preoccupied.

Of the 768 classifiable students who indicated their gender, 454 (59%) were women and 314 (41%) were men. The frequencies and proportions of participants for each Gender X Attachment classification are presented in Table 3-1. A chi-square analysis was performed to determine whether

Table 3-1  
Prescreening Attachment Classification

Gender	Attachment				Total
	Secure	Fearful	Preoccupied	Dismissing	
Men	164 (52%)	56 (18%)	44 (14%)	50 (16%)	314 (100%)
Women	222 (49%)	111 (24%)	52 (11%)	69 (15%)	454 (100%)
Total	386 (50%)	167 (22%)	96 (13%)	119 (15%)	768 (100%)

$\chi^2 (3, N=768) = 5.60, p < .15$

attachment classification was independent of the gender of participants. The resulting value, chi-square (3, N=768) = 5.60,  $p < .15$ , indicated that attachment classification was not significantly associated with gender of participants. There were also no gender differences in the unclassifiable students when this group was included in the analysis, chi-square (4, N=1151) = 5.9,  $p > .20$ .

This finding of relative independence of gender and attachment classification is consistent with attachment theory and much prior research (Campos et al., 1983; Hazan & Shaver, 1994). However, it is inconsistent with some recent studies with college samples that have reported over representation of females in the preoccupied/anxious-ambivalent category (Bartholomew & Horowitz, 1991; Kobak & Sceery, 1988), or over representation of males in the dismissing category (Bartholomew & Horowitz, 1991; Brennan, Shaver, & Tobey, 1991).

An attempt was made to secure 25 participants for each of the Attachment X Gender cells in the 4 X 2 ANOVA design. To accomplish this,

a list of the 768 classifiable students in the subject pool was generated, grouped by gender within each attachment style but in random order within each of the eight cell categories. Students were contacted by telephone by the principal investigator or a research assistant and invited to participate in the research study until the requisite number of participants was obtained for each category. With attrition due to scheduling problems and no-shows, 193 students actually completed the study procedures. These participants were distributed among the eight cells in the frequencies presented in Table 3-2.

Table 3-2  
Number of Participants in Each Gender X Attachment Cell

Gender	Attachment Group			
	Secure	Fearful	Preoccupied	Dismissing
Men	21	25	25	20
Women	26	27	26	23

As a check on the method of selecting subjects for the attachment groups, mean scores on each prototype (on a scale from 0-4) were computed for each of the four attachment style groups and are given below. For the group of participants classified secure (N=47) the mean scale scores were secure = 3.4, fearful = .8, preoccupied = 1.1, and dismissing = 1.2. For the fearful group (N=52) the mean scale scores were secure = 1.3, fearful = 3.5, preoccupied = 1.4, and dismissing = 1.5. For the preoccupied group (N=51) mean scale scores were secure = 1.6, fearful = 1.6, preoccupied = 3.7, and dismissing = 1.0. For the dismissing group (N=43), mean scores were

secure = 1.7, fearful = 1.7, preoccupied = .9, and dismissing = 3.7. These results offer supporting evidence for the effectiveness of the selection procedure for comprising groups that differed in attachment style.

The attachment questionnaire was also readministered to participants as part of the study procedures. Retesting took place approximately 2 to 3 months after the prescreening testing. The test-retest reliabilities for the four scales across groups were moderate and positive: for the secure scale  $r = .38$ , for the fearful scale  $r = .59$ , for the preoccupied scale  $r = .61$ , and for the dismissing scale,  $r = .43$ . Thus, there was evidence of moderate stability of responses to the attachment scales over the 2 to 3 month period.

Participants ( $N=193$ ) were asked to report their age, ethnicity, and marital status. The mean age of this late adolescent sample was 18.76 years ( $SD=1.18$  years). Participants were predominantly White Americans (76%), with minorities reporting that they were African American (7%), Hispanic (9%), Asian (5%), or Other (3%). Almost all students were single, with only 2 of the 193 participants reporting that they were married.

### Procedure

Students selected through the prescreening procedure reported to a laboratory room where they participated in the experimental session in groups of 2-5 persons. Each session was conducted by one of three female experimenters: the principal investigator or one of two undergraduate research assistants. The experimenter explained the study and obtained informed consent from the participants (see Appendix B). The experimenter then distributed to each participant a questionnaire packet that included a



brief demographic survey asking the student's gender, age, marital status, and ethnicity. Next, participants again completed the Bartholomew (Griffin & Bartholomew, 1994) four-item attachment measure to assess test-retest reliability. Participants then were asked to write a narrative account of a stress event and to complete two questionnaires referring to that experience: the Impact of Event Scale (Zilberg, Weiss, & Horowitz, 1982) and the Ways of Coping (Folkman & Lazarus, 1985). Finally, participants completed a self-report measure of psychiatric symptomatology as experienced during the previous week, the Brief Symptom Inventory (Derogatis, 1992).

### Measures

#### Attachment Style

Attachment was measured in the prescreening session using the Bartholomew (Griffin & Bartholomew, 1994) four-category measure. This instrument consists of four short paragraphs describing a person's orientation in close relationships (see Appendix A). The four prototypes, in the same order as on the instrument, are secure, fearful, preoccupied and dismissing.

The categorical classification of attachment has been useful as an heuristic and in understanding the dynamics of attachment relationships (Griffin & Bartholomew, 1994; Feeney, Noller, & Hanrahan, 1994). However, it is generally recognized that the categories of attachment are not mutually exclusive. Griffin and Bartholomew (1994) refer to them as "fuzzy sets" and observe that the "goodness of fit" of the best fitting prototype varies from person to person. Therefore, rather than a forced choice categorical

classification, subjects were asked to indicate how well each prototype described him or her. Respondents were instructed to read each paragraph and to indicate on a scale from 0-4 how well that paragraph described how he or she was in relationships. Because the design involved selecting subjects who were good representatives of each prototype, subjects were identified as exemplars of a particular attachment style only if the highest rated prototype was at least one scale unit above the next highest rated prototype. This method of assignment to prototype has been used with both interview assessment of attachment and with the self-report method used in the current study, and Bartholomew has reported moderate positive correlations between these two methods of prototype assessment (Griffin & Bartholomew, 1994, p. 28). Bartholomew does not report specific figures on test-retest reliability of the self-report measure.

Bartholomew has presented evidence for the validity of her self-report measure of attachment in the form of research that documents its relationship to the five-factor model of personality (Costa & McCrae, 1985) as well as its ability to predict relationship satisfaction and a variety of interpersonal variables not included in the five-factor model (Griffin & Bartholomew, 1994).

### Stress Experiences

This study assessed responses to self-reported stressors in the lives of college students. Participants were asked to write a narrative account of a stress experience according to the following instructions:

Please identify for yourself a stressful experience you have had within the past year. It should be a conflict or difficulty or stress involving you and at least one other person. After you have identified the experience, and have it firmly in your mind, please take about 15 minutes to describe the experience below. In your description, please include the following information:

1. Briefly describe the nature of the experience, the events, actions, and behaviors that occurred.
2. Say something about the experiences, thoughts, or reactions of each of the people involved.
3. How did the situation turn out in the end?

It was anticipated that these instructions would elicit accounts of events ranging in severity from major life events to everyday hassles. While many studies of stress and mental health have targeted major life events for study (Holmes & Rahe, 1967), there is good evidence that everyday stressors are also strongly related to well-being. For instance, in a research program on stress and coping in adolescents, Seiffge-Krenke (1995) measured both major and minor life events and found that "minor events were more strongly related to dysfunction ( $r=.61$ ) than major events ( $r=.19$ )" (Seiffge-Krenke, 1995, p. 230).

An analysis of the written accounts of stress experiences was undertaken to see whether the four attachment groups differed in the type or severity of experiences reported or in the representation of affective or interpersonal aspects of their experiences. Two undergraduate psychology students read each narrative and independently rated the narrative on eleven variables. The eleven variables included two nominal variables that assessed the type of event and the relationship to the other person involved.

The remaining nine variables were scored on a 7-point rating scale and included items assessing the seriousness of the event, how positively others were described, how much emotion was expressed, how much hostility was expressed by the narrator, how much hostility was expressed by others toward the narrator, how much support was expressed by the narrator, how much support was expressed by others toward the narrator, whether the outcome was positive or negative, and how resolved the situation was in the end (see Appendix C).

#### Impact of Event Scale (IES)

Distress related to the stress event was assessed with the Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez, 1979; Zilberg, Weiss, & Horowitz, 1982) (see Appendix D). The IES was developed within the context of the study and treatment of stress response syndromes generally and PTSD in particular (Horowitz, 1986). The Impact of Event Scale is a 15-item self-report instrument that assesses signs of both intrusion and avoidance in cognitions and affects related to a designated stressor. The 7 items of the intrusion subscale reflect intrusive experiencing of the stressor, such as "Other things kept making me think of it." The 8 items of the avoidance subscale reflect avoidance of event-related cognition and affect, for example, "I avoided letting myself get upset when I thought about it or was reminded of it." The items are answered on a 4-point scale of frequency, from "not at all" to "often." Separate scores are derived for the avoidance and intrusion subscales.

Horowitz believes that a high score on the intrusion subscale suggests an overwhelmed state in relation to the stress event, while a high score on the avoidance subscale reflects a process in which the person avoids the event to the point of being unable to cognitively process the experience at all (Horowitz, 1986). Validity of the IES is attested to by an extensive program of research that has shown this scale to be a sensitive indicator of general distress in response to events varying widely in severity (Horowitz, 1986).

Horowitz, Field, and Classen (1993) have presented evidence for the reliability of the IES. Split half reliability is reported as  $r=.86$ , whereas internal consistency for the subscales, using Cronbach's alpha, was .78 for the intrusion subscale and .82 for the avoidance subscale (p. 762). While Horowitz indicates that personality factors are one important influence on stress response symptoms, the IES scales are not seen as primarily reflecting stable individual differences. Perhaps for this reason, Horowitz does not report test-retest reliabilities.

#### Ways of Coping (WOC)

Coping responses were assessed with the revised Ways of Coping measure devised by Susan Folkman and Richard Lazarus (Folkman & Lazarus, 1985, 1988). This self-report scale is designed to assess the array of thoughts and behaviors a person uses to deal with a particular stressful situation. Items were empirically derived from interviews with people about how they had dealt with recent stress experiences. The eight scales, derived by factor analysis from interview reported items, include confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility,

escape-avoidance, planful problem-solving, and positive reappraisal (Folkman & Lazarus, 1985).

Folkman and Lazarus (1988) reported internal consistencies (Cronbach's alpha) ranging from .61 to .79 (p. 9). Folkman and Lazarus believe that their measure is most appropriate for measuring coping processes, which change with the stress context, and that therefore test-retest reliabilities are not appropriate for the WOC scales. However, at least one recent study has indicated considerable test-retest stability ( $\alpha > 0.6$ ) in WOC scores over a 3-year period in a study of parents of children with Down's syndrome (Hatton, Knussen, Sloper, & Turner, 1995).

#### Brief Symptom Inventory (BSI)

Self-reported psychiatric symptoms were assessed with the Brief Symptom Inventory (BSI) (Derogatis, 1992) (see Appendix E). The BSI is a shortened version of the Symptom Checklist 90 Revised (SCL-90-R) devised by Derogatis as a screening instrument for evaluating symptomatic distress in psychiatric and medical patients. The SCL-90-R is a reliable and valid instrument that has been shown to correlate with both interview based assessments of psychopathology and with other widely used screening instruments (Derogatis & Lazarus, 1994). The BSI is a shortened version of the SCL-90-R and correlates very highly with it across all symptom dimensions (p. 226). The BSI consists of 53 of the 90 items included on the SCL-90 and can be completed in approximately 10 minutes. Norms are

available for nonpatient adolescents and nonpatient adults, with separate norms for men and women.

The BSI is scored for overall level of symptomatology (the Global Severity Index) as well as for 9 symptom scales. These scales are Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism.

Derogatis (1992) reported internal consistencies of BSI scales, using Cronbach's alpha, as ranging from a low of .71 for Psychoticism, to a high of .85 for Depression. Two-week test-retest reliabilities ranged from .68 to .91 for the subscales and .90 for the Global Severity Index.

### Predictions

These measures were used to test predictions concerning the relationships between attachment style and stress-related factors. In particular, we expected that the Impact of Event Scale would reflect predicted differences in stress related experiences of intrusion and avoidance, with persons with a preoccupied style evincing higher levels of intrusive experiences, persons with a dismissing style reporting higher levels of avoidant symptoms, and persons with a secure style reporting low levels of both kinds of distress. Likewise, it was expected that the Ways of Coping would reflect predicted differences in coping with the stress event, with secure participants reporting more support seeking behaviors and dismissing participants reporting more distancing strategies. Finally, it was expected that the BSI would reflect predicted differences in ongoing levels of

psychological distress, with persons with a dismissing style reporting increased levels of somatization and hostility, persons with a fearful attachment style reporting the highest levels of anxiety and depression, persons with a preoccupied style reporting the most general distress, and persons with a secure style reporting little distress.



## CHAPTER 4 RESULTS

To test the research hypotheses, a 4 X 2 between subject analysis of variance (ANOVA) design was used, with four levels of attachment (secure, fearful, preoccupied and dismissing) and two genders (men and women) serving as the independent variables and scores on the IES, WOC, and BSI serving as the dependent variables. Preliminary to the ANOVAS, a 4 (Attachment) X 2 (Gender) multivariate analysis of variance (MANOVA) was performed to control for Type I error resulting from multiple tests of significance. An alpha level of .05 was used for all statistical tests.

### Multivariate Analysis of Variance (MANOVA)

On the basis of theory, the 20 dependent variables were expected to be correlated with one another. In order to control for Type I error, a 4 (Attachment) X 2 (Gender) multivariate analysis of variance (MANOVA) was used to examine the relationship of attachment and gender to the set of measures of coping and distress. The MANOVA yielded a significant main effect for attachment,  $F(60, 368)=1.80, p<.0006$ , and a significant main effect for gender,  $F(20, 124)=1.96, p<.01$ . The MANOVA did not indicate a significant interaction effect  $F(60, 368)=.94, p<.61$ . These significant main effects warranted univariate analyses of both main effects.

### Analyses of Variance (ANOVAS)

To test the hypotheses in this study, a series of 4 (Attachment) X 2 (Gender) between subject ANOVAS were conducted, followed by planned comparisons, as appropriate.

#### Impact of Events Scale (IES)

Scores on the Impact of Events Scale (IES) served as the dependent variables in testing the first hypothesis concerning attachment differences in intrusive and avoidant experiencing of distress following a stress event. The 4 X 2 ANOVA was performed along each of the two subscales (intrusion and avoidance) of the IES. Means and standard deviations for scales of the IES are presented in Table 4-1.

Table 4-1  
Means for Impact of Event Scale (IES)

Subscale	Attachment			
	Secure	Fearful	Preoccupied	Dismissing
Intrusion				
Men	14.3 (7.3)	16.7 (8.4)	20.6 (6.6)	21.3 (6.8)
Women	21.4 (7.4)	20.6 (6.9)	24.7 (8.8)	19.3 (7.3)
Avoidance				
Men	13.0 (6.5)	17.0 (8.9)	17.2 (7.6)	14.6 (6.4)
Women	16.8 (8.3)	19.1 (8.9)	13.9 (7.8)	16.3 (7.6)

Note: Standard deviations are in parentheses.

The prediction that persons with a preoccupied style would display particularly high levels of intrusive symptoms, as measured by the intrusion subscale of the IES, was supported. Results of the 4 X 2 ANOVA indicated a main effect of attachment on the intrusion subscale,  $F(3,185)=3.59, p<.01$ .

The secure group reported the fewest intrusive symptoms ( $M=18.2$ ), followed by the fearful ( $M=18.7$ ), dismissing ( $M=20.2$ ), and preoccupied ( $M=22.7$ ) groups, in that order. The preoccupied group reported significantly more intrusive symptoms than the fearful and secure groups but not significantly more than the dismissing group, using the Student Newman-Keuls test for differences between means,  $p<.05$ .

There was also a main effect of gender on the intrusion subscale,  $F(1,185)=10.2$ ,  $p<.002$ , with women reporting more intrusive symptoms ( $M=21.6$ ) than men ( $M=18.2$ ). The interaction effect was also significant,  $F(3,185)=2.8$ ,  $p<.04$ . Women reported more intrusive symptoms than men except in the dismissing category, where women reported fewer intrusive symptoms than did men.

Regarding avoidant symptomatology, the prediction that dismissing styles would be associated with higher levels of symptomatology was not supported by the data. In the  $4 \times 2$  ANOVA using the avoidance subscale of the IES, there was not a significant main effect for attachment,  $F(3,185)=1.54$ ,  $p<.21$ . Neither was there a significant effect for gender,  $F(1,185)=.76$ ,  $p<.38$ , nor for the Attachment  $\times$  Gender interaction,  $F(3,185)=1.83$ ,  $p<.14$ .

### Ways of Coping (WOC)

Scores on the Ways of Coping (WOC) scales served as the dependent variables in testing the second hypothesis concerning attachment differences in coping styles following a stress event. Means and standard deviations for the WOC scales are presented in Table 4-2. Hypotheses were made for the

social support and distancing scales. It was predicted that the secure attachment style would be associated with higher levels of social support seeking, but this prediction was not supported in the analysis. The 4 X 2 ANOVA for the social support scale of the WOC did not yield a main effect for attachment ( $F(3,182)=1.40, p<.39$ ) but did indicate a main effect for gender,  $F(1,183)=14.33, p<.0002$ . Women ( $M=14.7$ ) reported more social support seeking following the stress event than did men ( $M=12.6$ ). There was not a significant Attachment X Gender interaction effect,  $F(3,183)=1.25, p<.29$ .

In addition, it was predicted that subjects in the dismissing group would report higher levels of distancing coping following the stress event, but this prediction was not supported by the analysis. For the distancing scale of the WOC, there was not a significant main effect of attachment,  $F(3,182)=1.40, p<.25$ . Neither was there a main effect for gender,  $F(1,182)=.46, p<.50$ , nor an interaction between Attachment and Gender,  $F(3,182)=.34, p<.79$ .

The analysis along other scales of the WOC did reveal significant effects. Significant effects for escape-avoidance, positive reappraisal, and confrontive coping were found. The 4 X 2 ANOVA along the escape-avoidance scale indicated a main effect of attachment,  $F(3,180)=2.70, p<.05$ . The secure group had the lowest mean for escape-avoidance ( $M=14.6$ ), followed by the dismissing ( $M=15.7$ ), then the fearful ( $M=16.7$ ), and the preoccupied ( $M=16.7$ ) groups, respectively. Post hoc tests failed to find the location of these differences, however.

Table 4-2  
Means for Ways of Coping (WOC)

Subscale	Attachment			
	Secure	Fearful	Preoccupied	Dismissing
Confrontive coping				
Men	11.3 (3.1)	13.3 (3.6)	11.9 (3.4)	12.1 (4.1)
Women	12.6 (2.9)	13.3 (3.8)	13.2 (3.2)	14.0 (4.1)
Distancing				
Men	11.5 (2.3)	12.2 (3.6)	11.2 (3.0)	10.7 (3.0)
Women	11.2 (3.6)	12.3 (3.3)	12.2 (3.4)	11.3 (3.3)
Self-controlling				
Men	15.0 (4.3)	16.0 (2.8)	16.1 (2.9)	16.6 (4.3)
Women	15.5 (3.4)	16.0 (3.8)	15.5 (3.6)	16.0 (4.3)
Seeking social support				
Men	13.1 (3.8)	11.3 (3.1)	13.5 (3.4)	12.7 (4.2)
Women	13.8 (3.8)	14.9 (4.1)	15.2 (3.1)	14.8 (4.2)
Accepting responsibility				
Men	8.5 (2.6)	9.7 (2.6)	8.7 (3.4)	8.6 (2.6)
Women	8.7 (3.0)	9.7 (3.1)	9.5 (3.4)	8.7 (3.9)
Escape avoidance				
Men	13.1 (3.6)	16.3 (5.0)	15.4 (4.6)	15.5 (4.3)
Women	15.7 (3.4)	16.9 (4.4)	17.8 (4.3)	15.8 (4.0)
Problem solving				
Men	12.4 (3.8)	12.5 (3.6)	13.3 (3.4)	13.5 (3.6)
Women	12.0 (3.9)	13.9 (4.0)	14.4 (4.1)	14.8 (4.9)
Positive reappraisal				
Men	14.7 (4.1)	12.2 (4.4)	17.0 (4.5)	16.0 (4.9)
Women	16.2 (5.3)	17.3 (2.9)	17.3 (5.0)	15.6 (4.7)

Note: Standard deviations are in parentheses.

There was also a main effect for gender on the escape avoidance variable,  $F(1,180)=6.07$ ,  $p<.01$ , with women ( $M=16.6$ ) reporting higher levels of escape-avoidance than men ( $M=15.1$ ). The Attachment X Gender interaction effect was not significant,  $F(3,180)=.86$ ,  $p<.46$ .

On the confrontive coping scale, the 4 x 2 ANOVA revealed a significant main effect of gender,  $F(1,182)=4.76$ ,  $p<.03$ , such that women ( $M=13.3$ ) had higher scores on confrontive coping than did men ( $M=12.2$ ). There was not a significant main effect of attachment,  $F(3,182)=1.31$ ,  $p<.27$ , nor for the Attachment X Gender interaction,  $F(3,182)=.58$ ,  $p<.63$ .

On the positive reappraisal scale, the 4 X 2 ANOVA revealed a significant main effect of gender,  $F(1,182)=6.79$ ,  $p<.01$ , with women scoring higher than men. There was not a main effect of attachment style,  $F(3,182)=2.16$ ,  $p<.09$ , but the Attachment X Gender interaction effect was significant,  $F(3,182)=3.53$ ,  $p<.02$ . Men and women in the preoccupied and dismissing groups did not differ in positive reappraisal, while women scored higher than men on this variable in the secure and fearful groups.

#### Brief Symptom Inventory (BSI)

Scores on the Brief Symptom Inventory (BSI) served as the dependent variables in testing the third hypothesis, concerning attachment styles and symptoms of psychological distress. Predictions were made for the following subscales: Somatization, Hostility, Depression, Anxiety, and the Global Severity Index, a summary score. Means and standard deviations for the BSI scales are presented in Table 4-3.

Table 4-3  
Means for Brief Symptom Inventory (BSI)

Subscale	Attachment			
	Secure	Fearful	Preoccupied	Dismissing
Somatization				
Men	2.0 (2.0)	3.6 (4.3)	2.5 (2.1)	1.2 (1.9)
Women	3.3 (4.1)	3.4 (3.3)	4.7 (5.3)	1.9 (2.3)
Obsessive-Compulsive				
Men	5.2 (4.7)	7.0 (4.0)	7.2 (5.0)	5.2 (4.9)
Women	6.1 (5.2)	6.1 (4.0)	9.9 (6.0)	5.4 (4.8)
Interpersonal Sensitivity				
Men	2.3 (2.6)	4.5 (2.8)	4.2 (3.7)	1.8 (2.6)
Women	3.4 (2.5)	4.0 (3.6)	8.0 (5.0)	2.5 (2.2)
Depression				
Men	3.3 (2.6)	6.7 (4.5)	7.0 (5.2)	3.3 (5.1)
Women	5.6 (5.3)	6.3 (3.9)	8.9 (5.7)	3.6 (3.0)
Anxiety				
Men	3.1 (2.5)	4.6 (3.5)	4.6 (2.8)	2.8 (2.6)
Women	5.2 (4.4)	4.7 (3.5)	7.6 (4.7)	3.6 (2.4)
Hostility				
men	3.5 (2.0)	5.5 (5.7)	4.4 (3.5)	5.1 (4.1)
Women	3.0 (2.6)	4.4 (3.3)	6.0 (4.1)	4.3 (4.1)
Phobic Anxiety				
Men	.7 (1.1)	1.3 (1.9)	1.3 (2.2)	.6 (1.1)
Women	.9 (1.9)	1.6 (2.5)	2.5 (2.4)	.3 ( .7)
Paranoid Ideation				
Men	3.6 (2.6)	5.6 (3.3)	5.0 (3.4)	4.2 (4.1)
Women	3.6 (3.6)	4.0 (2.9)	6.8 (4.7)	3.1 (3.2)
Psychoticism				
Men	2.2 (2.3)	5.2 (3.1)	4.1 (3.3)	2.3 (3.4)
Women	3.3 (3.8)	4.9 (3.5)	6.7 (4.3)	2.4 (2.3)
GSI				
Men	26.5 (16.3)	46.0 (23.9)	42.2 (23.7)	28.0 (25.2)
Women	37.5 (29.7)	45.7 (24.2)	63.5 (36.2)	25.9 (18.0)

Note: Standard deviations are in parentheses.

The prediction that the dismissing attachment style would be associated with higher levels of Somatization and Hostility was not supported. For the Somatization subscale, there was a significant main effect for attachment,  $F(3,183)=3.37$ ,  $p<.02$ . Contrary to predictions, the dismissing group scored lowest on this variable ( $M=1.56$ ), followed by the secure ( $M=2.72$ ), the fearful ( $M=3.49$ ), and the preoccupied ( $M=3.60$ ) groups, respectively. The dismissing group was significantly lower than the fearful and preoccupied groups.

There was also a main effect of gender on the Somatization subscale,  $F(1,183)=3.81$ ,  $p<.05$ , such that women ( $M=3.34$ ) scored higher on Somatization than did men ( $M=2.41$ ). There was not a significant interaction effect,  $F(3,183)=1.05$ ,  $p<.37$ .

For the Hostility subscale, the main effect of attachment showed a trend towards significance,  $F(3,182)=2.56$ ,  $p<.06$ . The secure group ( $M=3.23$ ) scored lowest on the Hostility scale, followed by the dismissing ( $M=4.70$ ), fearful ( $M=4.96$ ), and the preoccupied ( $M=5.22$ ) groups, in that order. There was no main effect for gender,  $F(1,182)=.06$ ,  $p<.81$ . Neither was there an interaction effect,  $F(3,182)=1.22$ ,  $p<.30$ .

In addition, it was predicted that the fearful attachment style would be associated with especially high levels of depression and anxiety, and this prediction was partially supported. For the Depression subscale the main effect of attachment was significant,  $F(3,177)=8.89$ ,  $p<.0001$ . The dismissing group ( $M=3.45$ ) scored lowest on this subscale, followed by the secure ( $M=4.57$ ), fearful ( $M=6.52$ ), and the preoccupied ( $M=7.96$ ) groups,



respectively. The fearful and preoccupied groups were significantly higher than the secure and dismissing groups, at the .05 level, using the Student Newman Keuls test. There was not a main effect of gender on this subscale,  $F(1,177)=2.50$ ,  $p<.12$ , nor was there an interaction effect,  $F(3,177)=.99$ ,  $p<.40$ .

For the Anxiety subscale, there was a significant main effect of attachment,  $F(3,185)=5.77$ ,  $p<.0009$ . The dismissing group ( $M=3.21$ ) scored lowest on this subscale, followed by the secure ( $M=4.23$ ), fearful ( $M=4.65$ ), and the preoccupied ( $M=6.12$ ) groups. The preoccupied group scored significantly higher than the other three groups, at the .05 level, using Student Newman Keuls test. There was also a significant main effect of gender,  $F(1,185)=8.87$ ,  $p<.003$ , with women ( $M=5.29$ ) reporting more anxiety than men ( $M=3.86$ ). The interaction effect was not significant,  $F(3,185)=1.91$ ,  $p<.13$ .

It was predicted that the secure group would have significantly less overall symptomatology than the other groups, and this prediction was partially supported by the data. On the Global Severity Index, the BSI summary measure, there was a significant main effect for Attachment,  $F(3,161)=8.78$ ,  $p<.0001$ . The dismissing group ( $M=27.0$ ) scored lowest on this measure, followed by the secure ( $M=32.8$ ), fearful ( $M=45.8$ ), and the preoccupied ( $M=53.1$ ) groups, respectively. The secure and dismissing groups did not differ from each other and were lower than the fearful and preoccupied groups, at the .05 level, using the Student Newman Keuls test. There was also a main effect of gender on this summary variable,  $F(1,161)=3.89$ ,  $p<.05$ , such that women ( $M=44.2$ ) scored higher than men

( $M=36.5$ ). The Attachment X Gender interaction was not significant,  $F(3,161)=1.88, p<.13$ .

Results of the 4 X 2 ANOVA indicated that there were significant main effects for the attachment variable on the remaining five BSI subscales, and these will be presented below.

For the Obsessive-Compulsive subscale, there was a significant main effect of attachment,  $F(3,184)=4.37, p<.005$ . The dismissing group ( $M=5.26$ ) scored lowest on this variable, followed by the secure ( $M=5.70$ ), fearful ( $M=6.58$ ), and preoccupied ( $M=8.57$ ) groups, respectively. The preoccupied group scored significantly higher than each of the other groups, which did not differ from each other. There was not a main effect of gender on this variable,  $F(1,184)=1.06, p<.31$ ; and the interaction effect was not significant,  $F(3,184)=1.21, p<.31$ .

On the Interpersonal Sensitivity subscale, there was a significant main effect of attachment,  $F(3,182)=13.42, p<.0001$ . The dismissing group ( $M=2.14$ ) scored lowest on this subscale, followed by the secure ( $M=2.93$ ), fearful ( $M=4.23$ ), and the preoccupied ( $M=6.14$ ) groups, respectively. The preoccupied group was significantly higher than the other three groups. In addition, the fearful group scored significantly higher than the dismissing group. There was also a significant main effect for gender,  $F(1,182)=7.25, p<.008$ . Women ( $M=4.52$ ) scored higher on this subscale than did men ( $M=3.30$ ). There was a significant interaction effect,  $F(3,182)=3.83, p<.01$ . Women scored higher than men on Interpersonal Sensitivity, except in the fearful attachment group, in which means for men and women were equal.

On the subscale measuring Phobic Anxiety, there was a significant effect of attachment,  $F(3,185)=5.71$ ,  $p<.0009$ . The dismissing group ( $M=.40$ ) scored lowest on this variable, followed by the secure group ( $M=.81$ ), fearful group ( $M=1.42$ ), and the preoccupied group ( $M=1.90$ ), respectively. The preoccupied group was significantly higher than the secure and dismissing groups, at the .05 level, using Student Newman Keuls. Similarly, the fearful group was significantly higher than the dismissing group. There was no main effect for gender,  $F(1,185)=1.65$ ,  $p<.20$ , or for the Attachment X Gender interaction,  $F(3,185)=1.17$ ,  $p<.32$ .

On the subscale measuring Paranoid Ideation, there was a significant effect of attachment,  $F(3,182)=4.55$ ,  $p<.004$ . The secure group ( $M=3.59$ ) scored lowest on this variable, followed by the dismissing ( $M=3.61$ ), fearful ( $M=4.73$ ), and the preoccupied ( $M=5.88$ ) groups, respectively. The preoccupied group was significantly higher than the dismissing and secure groups, at the .05 level, using the Student Newman Keuls. There was no significant main effect for gender,  $F(1,182)=.10$ ,  $p<.75$ , and no significant interaction effect,  $F(3,182)=2.26$ ,  $p<.08$ .

On the subscale measuring Psychoticism, the main effect of attachment was significant,  $F(3,181)=9.66$ ,  $p<.0001$ . The dismissing group ( $M=2.36$ ) scored lowest on this variable, followed by the secure group ( $M=2.83$ ), the fearful group ( $M=5.04$ ), and the preoccupied group ( $M=5.38$ ), in that order. The preoccupied and fearful groups did not differ from each other but were significantly higher than the secure and dismissing groups, at the .05 level, using Student Newman Keuls. There was not a main effect for gender,

$F(1,181)=3.32, p<.07$ , nor for the Attachment X Gender interaction,  $F(3,181)=1.82, p<.14$ .

### Post Hoc Analyses

In addition to the primary analyses of the three dependent variables in relation to the study's hypotheses, two further sets of post hoc analyses were conducted. The first focused on a correlational analysis of the primary dependent variables, whereas the second focused on the written accounts of the stress experiences themselves.

### Correlational Analyses

Correlational analyses of the dependent variables were performed. The results will be presented for the IES subscales, for the WOC subscales, and for the BSI subscales. Correlations between scales will also be reported.

For the Impact of Events scale there was a moderate positive correlation between the intrusion subscale and the avoidance subscale,  $r=.29, p<.0001, N=193$ . This correlation value is comparable to the  $r=.42$  reported by Horowitz, Wilner, and Alvarez (1979) and interpreted as indicating that the two subscales "are associated, but do not measure identical constructs" (Horowitz et al., 1979, p. 213).

On the Ways of Coping scale, there were low to moderate positive correlations among most of the subscales (Table 4-4). For instance, self-controlling correlated positively ( $r=.46$ ) with distancing, whereas social support seeking was negatively related ( $r=-.20$ ) with distancing. This pattern

Table 4-4  
Intercorrelations Between Subscales of the Ways of Coping (WOC)

Subscale	1	2	3	4	5	6	7	8
1. Confrontive coping	--							
2. Distancing	-.12	--						
3. Self-controlling	.01	.46****	--					
4. Seeking social support	.36****	-.20**	.01	--				
5. Accepting responsibility	.17*	.18*	.17*	-.01	--			
6. Escape avoidance	.35****	.19**	.28****	.18*	.42****	--		
7. Problem solving	.33****	.02	.19**	.25***	.25***	.12	--	
8. Positive reappraisal	.14	.15*	.24***	.32****	.21**	.33****	.27****	--

\* p < .05

\*\* p < .01

\*\*\* p < .001

\*\*\*\* p < .0001

of results indicates some relations among subscales but suggests that they are not all measuring the same thing.

All the subscales of the BSI were highly positively correlated with one another and with the Global Severity Index (GSI) (Table 4-5). Correlations among the subscales ranged from  $r=.31$  to  $r=.79$ . Correlations of the subscales with the GSI ranged from  $r=.67$  to  $r=.85$ . These high intercorrelations suggest that the nine BSI symptom dimensions are measuring similar, highly related constructs.

There were some noteworthy correlations between scales as well. For instance, the Ways of Coping escape-avoidance scale correlated positively with both the IES intrusion subscale ( $r=.52$ ) and the IES avoidance subscale ( $r=.39$ ), and the IES avoidance subscale correlated positively ( $r=.46$ ) with the WOC distancing subscale (Table 4-6). Also, the IES intrusion subscale was significantly positively correlated with the BSI (all subscales and the GSI, Table 4-6). The correlations between the subscales of the WOC and BSI were moderately positive, with noteworthy significant positive correlations between the WOC escape-avoidance subscale and all scales of the BSI (Table 4-7).

#### Analysis of Written Narratives

Two research assistants rated participants' written accounts of their stress experiences on eleven variables (see Appendix C). Two of the variables judged by raters were evaluated on nominal scales. First, raters were asked to evaluate the type of event participants described in their narrative. The

Table 4-5  
Intercorrelations Between Subscales of the Brief Symptom Inventory (BSI)

Subscale	1	2	3	4	5	6	7	8	9	10
1. Somatization	--									
2. Obsessive Compulsive	.51****	--								
3. Interpersonal Sensitivity	.35****	.54****	--							
4. Depression	.36****	.57****	.67****	--						
5. Anxiety	.60****	.64****	.58****	.63****	--					
6. Hostility	.21**	.50****	.54****	.51****	.45****	--				
7. Phobic Anxiety	.48****	.47****	.56****	.54****	.61****	.31****	--			
8. Paranoid Ideation	.29****	.51****	.64****	.61****	.56****	.64****	.42****	--		
9. Psychoticism	.36****	.61****	.70****	.79****	.62****	.55****	.55****	.64****	--	
10. GSI	.60****	.79****	.79****	.84****	.82****	.71****	.67****	.79****	.85****	--

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

\*\*\*\*  $p < .0001$

Table 4-6  
Correlations Between Subscales of the Impact of Events (IES) and Subscales  
of the WOC and the BSI

Scales	Intrusion	Avoidance
WOC		
Confrontive coping	.27***	.02
Distancing	.05	.46****
Self-controlling	.24***	.42****
Seeking social support	.24***	-.09
Accepting responsibility	.17*	.20**
Escape avoidance	.52****	.39****
Problem solving	.06	-.00
Positive reappraisal	.44****	.16*
BSI		
Obsessive compulsive	.26***	.15*
Interpersonal sensitivity	.34****	.10
Depression	.32****	.12
Anxiety	.38****	.11
Hostility	.31****	.10
Phobic anxiety	.29****	.09
Paranoid Ideation	.31****	.04
Psychoticism	.30****	.17
GSI	.40****	.13

\* p < .05

\*\* p < .01

\*\*\* p < .001

\*\*\*\* p < .0001



Table 4-7  
Correlations Between Subscales of the Ways of Coping (WOC) and the Brief Symptom Inventory (BSI)

BSI Subscales	WOC Subscales							
	Confrontive	Distancing	Self-controlling	Seeking social support	Accepting responsibility	Escape avoidance	Problem solving	Positive reappraisal
1. Somatization	.03	.09	.03	.07	.05	.24***	.08	.04
2. Obsessive compulsive	.09	.03	.01	.10	.18**	.29***	.02	.00
3. Interpersonal sensitivity	.12	.18**	.05	.07	.21***	.34***	.02	.10
4. Depression	.08	.10	.09	-.11	.27***	.42***	.01	.14
5. Anxiety	.09	.03	.07	.04	.21***	.38***	.20**	.12
6. Hostility	.33***	-.01	.05	.04	.17*	.39***	.07	-.06
7. Phobic Anxiety	.02	.01	.03	-.00	.09	.35***	.10	.18**
8. Paranoid Ideation	.15*	.13	.09	-.08	.17*	.28***	.05	.06
9. Psychoticism	.10	.11	.06	-.12	.23***	.35***	-.00	.07
10. GSI	.15*	.11	.06	-.09	.25***	.44***	.08	.07

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ , \*\*\*\* =  $p < .0001$

two raters agreed in the nominal categorization of the type of event 81% of the time. Across the raters, the most common type of event reported was "relational" (63%), followed by general "stress" (27%), "academic" (8%), and "other" (2%). Second, raters were asked to identify the other person involved in the stress experience. The two raters agreed in the nominal categorization of the other person 82% of the time. Across raters, participants most frequently depicted events involving a romantic partner (29%), followed by those involving same sex peers (26%), parents (20%), opposite sex peers (6%), siblings (4%), "other" (8%), and "no one" (8%). A chi-square analysis revealed that neither of these variables (type of event or other person involved) differed by attachment group or by gender.

Next, reliabilities were computed for the nine continuous variables scored by the two judges on 7-point rating scales. Interjudge reliabilities ranged from  $r=.36$  to  $r=.71$  (for seriousness of the event,  $r=.56$ ; for how positively others were depicted,  $r=.67$ ; for the amount of emotion expressed,  $r=.36$ ; for hostility expressed by the narrator,  $r=.59$ ; for hostility expressed toward the narrator,  $r=.71$ ; for support expressed by the narrator  $r=.57$ ; for support expressed by others toward the narrator  $r=.48$ ; for positiveness of the outcome,  $r=.67$ ; for amount of resolution,  $r=.68$ ). The ratings of the two judges were averaged, and means and standard deviations for each variable were computed using this averaged rating in subsequent analyses.

One item rated by the judges concerned the seriousness of the stress event, using a scale ranging from 0 ("trivial") through 3 ("normal") to 6 ("very stressful"). The grand mean for the seriousness rating was 3.5, somewhat

above the midpoint of 3.0, indicating that the group as a whole was reporting stress events of above "normal" seriousness. There were no significant differences among attachment groups in the seriousness of the event,  $F(3,181)=.97, p=.41$ . Because the effects of attachment style are expected to be more evident as stress increases, it was decided to divide participants into a low seriousness and high seriousness group, based on judges' ratings of the stress event. To accomplish this, all participants whose narratives were rated 3.0 (the midpoint of the rating scale) or below were classified as low seriousness ( $N=82$ ), and all participants whose narratives were rated above 3.0 were rated as high seriousness ( $N=107$ ). Seriousness was then entered as a fully crossed factor in a three-way ANOVA including four levels of attachment, two genders, and two levels of seriousness (i.e., a  $4 \times 2 \times 2$  ANOVA).

The Attachment X Gender X Seriousness interaction was not significant for any of the eight variables. Only one two-way interaction was significant. There was an interaction of gender and seriousness on how positive or negative others were perceived in the interaction,  $F(1,173)=4.04, p<.05$ . Women were rated as judging others more positively in more serious ( $M=2.92$ ) events than in less serious ( $M=2.43$ ) events, whereas the rated perceptions of men did not differ with the seriousness of the event.

For the nine continuous variables, there was a main effect for attachment only for the judges' ratings of the amount of empathy and support expressed by others for the narrator,  $F(3, 173)=3.70, p<.01$ . The preoccupied group ( $M=1.97$ ) was rated as reporting the most empathy and

support from others, followed by the fearful ( $M=1.74$ ), then the secure ( $M=1.67$ ), and finally the dismissing ( $M=1.18$ ) group. Only the dismissing group was significantly different from the preoccupied group, at the .05 level, using the Student Newman Keuls test for comparison of means.

For two of the eight continuous variables, there was a main effect of gender. On the rated seriousness of the event, there was a main effect of gender,  $F(1, 173)=17.08$   $p<.0001$ . Judges rated the events reported by women ( $M=3.67$ ) as more serious than those reported by men ( $M=3.31$ ). For the judges' ratings of the amount of emotion expressed in the narratives, there was also a main effect of gender,  $F(1, 173)=15.95$ ,  $p<.0001$ . The narratives of women ( $M=3.53$ ) were judged to contain more emotional expressiveness than those of men ( $M=3.04$ ).

While seriousness of the event did not have the expected interaction with attachment, it did have some predictable main effects on other rated variables. For instance, there were main effects of seriousness on the amount of emotion expressed,  $F(1,173)=41.68$ ,  $p<.0001$ , with more serious events ( $M=3.66$ ) being associated with more emotional expression than less serious events ( $M=2.82$ ). In addition, seriousness of the event had a main effect on how much support and empathy was expressed for others by participants,  $F(1,173)=10.38$ ,  $p<.002$ . More support and empathy was expressed by the narrator in more serious events ( $M=2.44$ ) than in less serious events ( $M=1.80$ ). Finally, there were main effects of seriousness on the outcome of the event,  $F(1, 173)=10.05$ ,  $p<.002$ . Outcomes for less serious

events ( $M=3.96$ ) were more positive than outcomes for more serious events ( $M=3.29$ ). Similarly, there were effects of seriousness on whether judges rated the stressful situation as resolved,  $F(1,173)=3.94$ ,  $p<.05$ . Accounts of less serious stress events ( $M=4.15$ ) were judged to be more resolved than accounts of more serious stress events ( $M=3.62$ ).

## CHAPTER 5 DISCUSSION

The results of this study may be interpreted as supporting the existence of a relationship between attachment style in college students, the experience of psychological distress, and responses to stress. The MANOVA indicated that there were effects of attachment style across the coping and distress variables studied. Although specific gender effects were not predicted, the MANOVA also revealed that there were significant effects of gender on the stress and coping variables measured. Compared to men, women frequently reported higher levels of distress and higher levels of a variety of coping strategies. The results provided mixed support for the specific research hypotheses concerning affect regulation differences in attachment types.

### Attachment Style

#### Impact of Event (IES)

The impact of stressful events was measured with the Impact of Events Scale (IES) (Horowitz et al., 1979). The IES addresses the two clusters of responding, intrusion and avoidance, and these were expected to relate to different styles of attachment. Specifically, intrusive experiencing was expected to be especially high for the preoccupied group; avoidant responding was expected to be especially high for the dismissing group; and

both kinds of stress responses were expected to be relatively low for the secure group.

As predicted, there was a main effect of attachment on the intrusion subscale of the IES. Participants with a preoccupied attachment style reported the highest levels of intrusive symptoms related to the stress event. The mean score of the preoccupied group was significantly higher than the mean scores of the secure and fearful groups. Thus, participants in the preoccupied group were more likely than participants in the secure and fearful groups to endorse such items as "I had waves of strong feelings about it" and "Other things kept making me think about it" (see IES, Appendix D). This finding is consistent with the formulation of this style as one in which awareness and expression of distress is heightened (Kobak & Sceery, 1988). This result replicates the finding of Mikulincer et al. (1993), who found that people with this attachment style reported increased trauma-related intrusion following a missile attack.

On the other hand, the hypothesis that people with a dismissing attachment style would report more avoidant symptoms in relation to a stress event was not supported. The avoidance subscale of the IES, used to test this hypothesis, includes such items as "I avoided letting myself get upset when I thought about it or was reminded of it" and "I tried not to think about it" (see IES, Appendix D). There was not a significant main effect for attachment on the avoidance subscale of the IES, and the highest mean score for avoidant symptoms was reported by the fearful group rather than the

dismissing group. Thus, the denial of distress thought to be characteristic of this group (Kobak & Sceery, 1988) did not manifest itself on this measure.

The hypothesis that people with a secure attachment style would be buffered against stress, and therefore show overall the lowest symptom levels following a stress event, received partial support. On both the intrusion and avoidance subscales, the secure group had the lowest mean symptom level of the four groups. However, there was a significant main effect of attachment only on the intrusion subscale, where the secure group differed significantly only from the preoccupied group. This finding is consistent with the notion that secure attachment may serve to reduce intrusive symptomatology in reaction to stress. These results are generally consistent with previous theoretical conceptualizations (Ainsworth, 1991; Bowlby, 1988) and empirical findings (Mikulincer et al., 1993).

### Ways of Coping (WOC)

It was hypothesized that persons with different attachment styles would employ coping strategies congruent with their style of interpersonal attachment. In general, the results of this study provided only mixed support for this hypothesis. Contrary to predictions, there was not a main effect for attachment for the social support seeking or distancing scales. Participants with a secure attachment style did not report high levels of social support seeking following a stress event nor did participants with a dismissing attachment style report elevated levels of distancing coping strategies. This study failed to replicate the attachment differences in social support seeking and distancing found by Mikulincer et al. (1993) in their



SCUD missile study. It is possible that the low Cronbach alphas for the WOC scales are in part responsible for the failure to find predicted differences on these scales.

Of the WOC subscales, only the escape avoidance subscale showed a main effect for the attachment variable. The escape avoidance subscale refers to coping through such behaviors as wishful thinking, withdrawal, and substance use. Consistent with the conceptualizations, the secure group was lowest on this variable, and the preoccupied group the highest.

#### Brief Symptom Inventory (BSI)

Differences in types of psychological distress symptoms, as reflected in subscale scores on the Brief Symptom Inventory (BSI), were hypothesized for the different attachment styles. It was expected that the dismissing group would show higher scores on subscales reflecting somatization and hostility, ways of manifesting psychological distress that require a minimal awareness, acknowledgement, or expression of negative psychological states. While there was a significant effect for attachment on the measure of somatization, the dismissing group scored quite low on this scale, contrary to hypotheses. In fact, the dismissing group scored very low on all subscales of the BSI and on the Global Severity Index (GSI), indicating either a general freedom from psychological distress or a restricted ability to acknowledge any symptoms.

The fearful group was hypothesized to show especially high scores on the Depression and Anxiety subscales of the BSI. There was a significant main effect of attachment on these scales. The fearful group did score significantly higher than the secure and dismissing groups on the Depression

subscale. However, the fearful group did not score significantly higher than the secure and dismissing groups on the Anxiety subscale and scored significantly lower than the preoccupied group on this scale.

As predicted, students in the preoccupied attachment group reported increased overall psychological distress. On every BSI subscale, the preoccupied group scored the highest of the four groups, and for most subscales the mean for the preoccupied group was significantly higher than one or all of the other attachment groups. These findings appear to offer additional evidence for the heightened distress of persons with preoccupied attachment.

Regarding secure attachments, it was hypothesized that, with an internalized positive attachment to serve as a buffer of life stress, the secure attachment group would manifest overall less psychological distress compared to the other groups. Consistent with this hypothesis, there was a main effect for attachment on the Global Severity Index, with the secure group scoring significantly lower than the fearful and preoccupied attachment groups.

It should be noted that, while the secure group had relatively low scores on the GSI, the mean for the dismissing group was somewhat lower than the secure group, although this difference was not statistically significant. This pattern of means was true for most of the BSI subscales as well.

### Summary of Findings on Affect Regulation

Overall, the evidence from this study provided partial support for some of the predictions about attachment style and affect regulation in relation to stress. Other aspects of these conceptualizations received equivocal, or no, empirical support.

#### The secure attachment style

The idea that persons with a secure attachment style would evidence relatively low levels of psychological distress received fairly consistent support. Both with respect to intrusiveness of a life event and in relation to overall psychological distress, the participants in the secure group displayed relatively low levels of distress. This group also displayed relatively low levels of escape avoidance coping strategies. These results are consistent with attachment theory (Ainsworth, 1991; Bowlby, 1988) and replicate the findings of previous research (Kobak & Sceery, 1988; Mikulincer et al., 1993). For instance, they support the conclusion of Mikulincer et al. (1993) that "the secure base that secure people may have attained in early attachment experiences seems to be a personal resource that facilitates successful encounters with future stressful situations" (Mikulincer et al., 1993, p. 823).

It should be noted that there was no evidence that the relatively low symptom levels of the secure group were mediated by increased use of social support seeking as a coping strategy. Attachment style was not significantly associated with social support seeking on the WOC, a finding that is inconsistent with previous reported research (Mikulincer et al., 1993). Other research has indicated that people with a secure attachment style show

increased use of social support under high, but not low, levels of stress (Simpson et al., 1992). It may be that the levels of stress represented by the stress events in this study were too low to evoke increased social support seeking in the secure group.

Data from the analysis of participants' written stress narratives may shed some light on the intensity of stress. When stress narratives were analyzed for the seriousness of the event represented, it was found that the mean level of seriousness for all attachment groups was above the midpoint (labeled "normal") and that there were no significant differences among attachment groups in seriousness of the event. Thus, while it is hard to determine whether the stress experiences were "high enough" to elicit support seeking in the secure attachment group, we did have evidence that the stress experiences were of at least a moderate intensity.

The stress narratives were also rated for the amount of support and empathy offered by others to the narrator, a variable which could be construed as an alternate index of social support as projected by the participant into his or her narrative. On this variable, there was an effect of attachment, but the preoccupied group was rated as depicting the most empathy and support, significantly more than the dismissing group. Thus, this measure also failed to support the hypothesis of increased use of social support by the secure group.

To test whether seriousness of the narrative event increased support seeking in the secure group, seriousness of the event was entered as a factor (along with attachment and gender) in the analysis of the narrative ratings

(including the rating of social support). There was no Seriousness X Attachment interaction for the social support variable. In other words, for this rating increased seriousness did not significantly increase social support in the narratives of secure participants relative to other attachment groups.

It may be that the findings of no relationship between the secure attachment style and our two indices of social support may simply indicate the absence of a relationship between these variables. However, it is possible that neither of these indices captured the aspects of support that have been identified as pivotal to the power of measures of social support to predict well-being, namely "support satisfaction," or "perceived adequacy" of support (Sarason et al., 1987). Future research might focus on continuing to explore the relationship between attachment and social support, using more sophisticated measures of social support that include assessments of adequacy and satisfaction, as well as more careful specification of levels of stress.

#### The preoccupied attachment style

The results gave clear support to the notion that persons with a preoccupied attachment style express increased levels of psychological distress. This was true both for reported intrusiveness of a specific life event and for general psychological distress. The preoccupied group also had higher levels of escape avoidance coping strategies. This relationship between the preoccupied attachment style and heightened distress replicates previous research using an attachment framework, including both studies using self-report (Mikulincer et al., 1993) and studies using interview

assessment of attachment (Kobak & Sceery, 1988). It is congruent with Bartholomew and Horowitz' contention that the preoccupied group occupies a quadrant of the interpersonal circle characterized by problems of being "overly expressive" (Bartholomew & Horowitz, 1991, p. 223). It is also consistent with Kobak's concept that the preoccupied group anchors one end of a continuum which runs from heightened expressions of distress and attachment at one end (hyperactivating, which is associated with the preoccupied group) to minimization and denial of distress and attachment at the other (deactivating, which is associated with the dismissing group) (Dozier & Kobak, 1992).

#### The fearful avoidant attachment style

The fearful attachment style was expected to be associated with high levels of depression and anxiety. Bartholomew and Horowitz (1991) described people in this group as having a negative view of both self and others, and Brennan et al. (1991) found people with this style to have the highest rates of alcoholic parents. While the fearful group did report relatively high levels of depression, the mean score for this and other BSI subscales was less than that for the preoccupied group. While inconsistent with study hypotheses, the finding that depression was somewhat higher for the preoccupied group relative to the fearful group is not particularly problematic in terms of attachment theory or prior research.

#### The dismissing avoidant attachment style

In theory, people with a dismissing attachment style should achieve security in the face of stress with deactivating strategies, which minimize

and deny the importance of distress and attachment. Therefore, the students in the dismissing group were expected to report higher levels of avoidance on the IES, distancing on the WOC, and Somatization and Hostility on the BSI. None of the predictions for the dismissing group materialized. Participants in the dismissing groups generally reported low levels of all symptoms on the BSI and moderately low on the IES. These findings are seemingly inconsistent with theoretical formulations characterizing this group as using distance and denial to deal with stressful situations (Bartholomew & Horowitz, 1991).

It is difficult to know how to interpret the negative findings for the dismissing group. It may be that this group is in fact indistinguishable from the secure group in their experience of psychological distress. Alternatively, it may be that participants in this group are so effective in suppressing awareness of distress that they do not experience (and therefore do not report) avoidance or distancing behaviors.

On self-report measures of mental health, people who state that they are symptom free may belong to one of two groups: those who are genuinely mentally healthy and those who are experiencing distress but denying it (Shedler, Mayman, & Manis, 1993). Shedler et al. have presented evidence that clinical judgment and physiological measures can effectively discriminate these two groups and recommend the use of such methods to increase the validity of mental health research. Within the attachment research literature, key studies identifying the characteristics of people with the dismissing attachment style have used methods such as clinical judgment

(Dozier & Lee, 1995) and physiological measures (Dozier & Kobak, 1992) rather than self-report methods. It may be that the characteristics of this group can best be explored using methods other than self-report.

### Gender Differences

On both subscales of the IES, mean reported symptom levels were higher for women than for men. This effect reached statistical significance for the intrusion subscale but not for the avoidance subscale. In his original report on the IES (Horowitz et al., 1979), Horowitz did not report gender differences in overall symptom scores, although some subsequent research with this instrument has reported higher levels of symptom reporting for women than for men (Steinglass & Gerrity, 1990).

As with the IES scale, the analysis of the WOC revealed unpredicted gender effects. On the social support, escape avoidance, confrontive coping, and positive reappraisal scales, women scored significantly higher than men. These findings are consistent with those of Seiffge-Krenke (1995) who found that, compared to boys, adolescent girls relied more heavily on social networks for coping and scored higher on both active coping and withdrawal across many different problem areas (Seiffge-Krenke, 1995).

On the BSI (including nine subscales, and the GSI), women reported higher levels of symptoms than men on all but the Hostility and Paranoid Ideation subscales. Symptom levels for women were significantly higher than those for men on the Somatization, Interpersonal Sensitivity, and Anxiety subscales and for the Global Severity Index.



In the ratings of the stress narratives, significant gender differences were found on two variables. Women were rated as reporting more serious events than men and as expressing more emotion than men in the narratives.

Thus, in this study, across attachment styles women tended to express more intrusion in relation to a stress event, higher levels of coping responses, and more general distress. This finding is congruent with other research which suggests that women rate the same event as more stressful than do men (Horowitz et al., 1977; Steinglass & Gerrity, 1990). It is also consistent with social role expectations for men and women. It should be emphasized that, despite the above gender differences in levels of distress, no significant gender differences were found in measures of attachment.

#### Interaction Effects

In this study, the MANOVA did not indicate a significant Attachment by Gender interaction effect. Overall, it would appear that the effects of attachment on coping and distress are similar within each gender.

#### Relations of Dependent Variables

Consistent with theoretical expectations, there were moderate correlations among the dependent variables in this study. For instance, the intrusion and avoidance subscales of the IES were moderately positively correlated ( $r=.29$ ). This correlation is in the same range as Horowitz's previous reports using this instrument (Horowitz, Wilner, & Alvarez, 1979). Similarly, the subscales of the WOC were primarily moderately positively correlated with one another, in a pattern comparable to that reported by

Folkman and Lazarus (1988) (See Table 4-4). These patterns are consistent with the notion that the subscales for these instruments are measuring constructs that are related but not identical.

The subscales of the Brief Symptom Inventory were highly positively correlated with each other and with the GSI (See Table 4-5). This is consistent with recent studies on the factor structure of the BSI and its parent instrument the SCL-90 (Carpenter & Hittner, 1995; Piersma, Boes, & Reaume, 1994). These studies suggest that the variance in these scales is best accounted for by a single global distress factor, rather than by the nine distinct factors described by Derogatis (1992).

Correlations of subscales across scales suggest that aspects of the different scales may have been tapping related dimensions. For instance, the intrusion subscale of the IES were positively correlated with the escape avoidance subscale of the WOC. Both of these scales in turn were positively correlated with each subscale of the BSI, and the GSI. It appears that together these subscales define a general distress dimension that spans the measures (see Tables 4-6 and 4-7).

### Summary

In sum, the present study did find a strong relationship between a preoccupied attachment style and increased distress. The study also found a moderate association between secure attachment style and lowered distress and between a fearful attachment style and increased distress. The dismissing attachment style was unexpectedly associated with very low levels

of distress, even on scales which attempted to measure manifestations of distress which are assumed to involve defensive processes.

### Limitations of the Study

While data from this study support the existence of a relationship between attachment style and distress, the study design is correlational and can give no information about causal relationships. Therefore, it is not possible to conclude that preexisting attachment styles influenced the participants in this study to experience higher or lower levels of distress. Alternatively, the vulnerability of some people to the effects of stress may affect both their reporting of symptoms and their perception of themselves in relationships. To some degree, this is a problem inherent in research using the attachment construct, which by its very nature is an individual difference variable not easily susceptible to experimental manipulation. Experimental studies of attachment can vary aspects of the situation, such as level of stress, and demonstrate the differential responses by different attachment types. Such studies have demonstrated more convincingly the relationship between attachment style and behavior. There is a need for more such studies.

Another limitation stems from the method of assessing attachment with a global self-report method. While this and similar measures have yielded robust results, it is natural to question how validly this measure taps the attachment construct and how comparable it is to other methods of attachment assessment. Bartholomew (1994) has argued that the importance of measurement issues to the progress of attachment research

cannot be overestimated and that "theory and measurement are inextricably linked" (p. 26). She advocates for increased study of the various measures of attachment and their convergent and discriminant validity. Continued efforts in this area may supply additional information about the strengths and weaknesses of various measures and facilitate the integration of results using, for instance, interview and self-report measures.

A third limitation of this study has to do with the exclusive reliance on self-report measures. Because all variables were assessed by self-report, the relationships among them could be an artifact of method variance. For instance, none of the measures have scales that are designed to detect social desirability or "faking good," and the differences in attachment groups could be attributed to the willingness to endorse items representing problematic situations both in the attachment items and in the dependent measures. As noted above, the reliance on self-report is a particularly strong threat to internal validity with respect to the dismissing group. To increase internal validity, future research should incorporate a variety of alternate ways of measuring dependent variables, such as clinical judgments, physiological measures, behavioral observations, and friend, partner, or observer ratings.

Finally, these results cannot necessarily be generalized to populations differing from the college student participants in this study, who represent a relatively high functioning group of unmarried late adolescents, at a point of transition between parent and peer attachment. Previous research with similar groups suggests that at this stage, both parental and peer attachments are important and that parental attachments have the stronger

stress-buffering effect (Armsden & Greenberg, 1988; Seiffge-Krenke, 1995). The results found with this group may not be generalizable to other groups, particularly to people at later ages or different life stages, people with psychiatric diagnoses, or to people in very different cultural or economic situations. Systematic replication of this study varying the above factors would help to establish the generalizability of the relationships between attachment and responses to stress.

### Conclusion

Subject to the limitations discussed above, the present study is consistent with the existence of strong relationships between attitudes toward close relationships and psychological well-being, at least in this population of college students. At minimum, it replicates and extends the findings of other research indicating that the quality of close relationships influences adjustment and symptomatic distress in adolescents (Armsden & Greenberg, 1987; Kobak & Sceery, 1988; Seiffge-Krenke, 1995). While much research remains to be done to clarify the nature of these relationships, the basic tenets of attachment theory--that attachment is an organizing construct that predicts interpersonal behavior, responses to stress, and psychological distress--continue to be supported by empirical research, including the current study.

Within the field of mental health, the study of close relationships inspired by the attachment framework has many potential applications for understanding both interpersonal behavior and psychological problems throughout the life span. It provides a framework for understanding a

person's close relationships and how they may affect that person's functioning. It specifically provides a rationale for using interpersonal, rather than exclusively symptom-focused, interventions with people experiencing psychological distress. In this vein, based on the analysis of conversations of depressed adolescents and their mothers, Kobak et al. (1991) suggested that "interventions aimed at building competencies in parent-teen communication or metamonitoring skills may prove more effective in treating depression than symptom-focused approaches" (p. 472).

Further, an attachment approach can inform the process of psychotherapy, especially the formation of the working alliance, which in so many ways parallels an attachment relationship (Bowlby, 1988). Bowlby viewed the role of the therapist as one of serving as a secure base for the client, facilitating exploration of internal models of self in relation to attachment, and providing a positive supportive experience which may be internalized and provide resilience in future stressful encounters. Hopefully, the efforts of clinicians in this direction will continue to be informed and enhanced by ongoing research in interpersonal attachment.

APPENDIX A  
RELATIONSHIP QUESTIONNAIRE

Please read the following four paragraphs. Then indicate, by marking one of the numbers from 0 to 4 on your answer sheet, how accurately each description reflects how you are in relationships.

1. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Not at all						Very much
like me	0	1	2	3	4	like me

2. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Not at all						Very much
like me	0	1	2	3	4	like me

3. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

Not at all						Very much
like me	0	1	2	3	4	like me

4. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Not at all						Very much
like me	0	1	2	3	4	like me

## APPENDIX B INFORMED CONSENT

The primary investigator of this study is Allison Kemp, a doctoral student in Counseling Psychology. This research focuses on how individual relationship styles may be related to aspects of stress and coping. You will be asked to complete a series of questionnaires, including one which asks you to write about a personal experience. The entire procedure should take approximately one hour. All information disclosed in the session will be confidential. The information will not be connected with your name. The only participant identification will be your subject number.

Some people may find that participation increases their appreciation of psychological approaches to stress and coping. It is possible that a participant could experience some discomfort while communicating about his/her personal experiences, and/or benefit from writing about them. Participation in this study is voluntary. You may withdraw your consent and discontinue participation at any time without prejudice. You do not have to answer any questions that you do not wish to answer. You may ask questions at any time during the procedure. For questions that may arise after the procedure, contact Allison Kemp, 235A Psychology Building, or leave a message in the Psychology Office at 392-0601.

For your participation, you will receive 2 units of experimental credit toward PSY 2013 requirements.

If you have questions or concerns about this research, or the rights of participants, they can be directed to the UFIRB office, PO Box 112250, University of Florida, Gainesville, FL 32611-2250.

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description.

Signed \_\_\_\_\_

Date \_\_\_\_\_

PI or Assistant \_\_\_\_\_



APPENDIX C  
NARRATIVE RATINGS

Subject # \_\_\_\_\_

1. What was the nature of the event?

\_\_\_relational \_\_\_academic \_\_\_stressful event \_\_\_other

2. How serious was the stress experience?

Trivial Normal Very Stressful

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

3. The central person in the narrative (other than the writer) is:

\_\_\_parent(s)  
\_\_\_same sex peer  
\_\_\_opposite sex peer  
\_\_\_sibling  
\_\_\_romantic partner  
\_\_\_other  
\_\_\_no one

4. How positively or negatively are other people described?

Very Negative Very Positive

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

5. How much emotion is expressed in the description of the experience?

None Moderate High

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

6. How much hostility is expressed by the narrator?

None                                      Some                                      A Lot

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

7. How much hostility is expressed by others toward the narrator?

None                                      Some                                      A Lot

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

8. How much empathy or support is expressed by the narrator?

None                                      Some                                      A Lot

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

9. How much empathy or support is expressed toward the narrator?

None                                      Some                                      A Lot

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

10. How positive or negative was the outcome of the experience?

Negative                                      Mixed                                      Positive

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

11. Was the experience resolved at the end?

Unresolved    Resolved

0 \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6

APPENDIX D  
IMPACT OF EVENT SCALE

Below is a list of comments made by people after stressful life events. Please indicate how frequently these comments were true for you in dealing with the event. Place the appropriate number from the response scale in the blank provided.

Response Scale

0	1	2	3
Not at all	Rarely	Sometimes	Often

- \_\_\_ 1. I thought about it when I didn't mean to.
- \_\_\_ 2. I avoided letting myself get upset when I thought about it or was reminded of it.
- \_\_\_ 3. I tried to remove it from memory.
- \_\_\_ 4. I had trouble falling asleep or staying asleep.
- \_\_\_ 5. I had waves of strong feelings about it.
- \_\_\_ 6. I had dreams about it.
- \_\_\_ 7. I stayed away from reminders of it.
- \_\_\_ 8. I felt as if it hadn't happened or it wasn't real.
- \_\_\_ 9. I tried not to talk about it.
- \_\_\_ 10. Pictures about it popped into my mind.
- \_\_\_ 11. Other things kept making me think about it.
- \_\_\_ 12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
- \_\_\_ 13. I tried not to think about it.
- \_\_\_ 14. Any reminder brought back feelings about it.
- \_\_\_ 15. My feelings about it were kind of numb.

# APPENDIX E

## BRIEF SYMPTOM INVENTORY

INSTRUCTIONS: On the next page is a set of problems people sometimes have. Please read each one carefully and blacken the circle that best describes HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY.

### SAMPLE BSI ITEMS

(Complete inventory includes 53 items)

	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY	
						HOW MUCH WERE YOU DISTRESSED BY:
#1	0	1	2	3	4	Nervousness or shakiness inside
#18	0	1	2	3	4	Feeling no interest in things
#51	0	1	2	3	4	Feeling that people will take advantage of you if you let them

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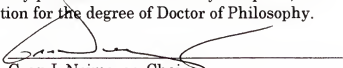
## BIOGRAPHICAL SKETCH

Martha Allison Kemp was born in Malone, New York, in 1944. The third of seven children, she spent her early years enjoying her large family and small town life in the Adirondack mountains. Her family relocated to Florida when she was 12, and she graduated from Summerlin Institute public high school in Bartow, Florida, in 1962.

Allison attended the University of Florida, earning her B.A. in psychology in 1969 and her M.A. from the social psychology program in 1973. After graduation, she first worked in mental health program evaluation, then as a therapist and director of a substance abuse treatment program in a women's correctional facility, and later as a therapist in a child sexual abuse treatment program. These challenging and rewarding experiences motivated her to return to school to pursue a doctoral degree in counseling psychology.

Allison lives with her husband, William Greenhood, and son, Nicholas Greenhood, in Newberry, Florida. Following graduation, she hopes to be able to combine assessment, therapy, and research activities in a school or community setting.

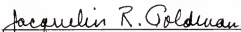
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Greg J. Neimeyer, Chair  
Professor of Psychology

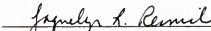
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Jacquelin R. Goldman,  
Professor of Clinical and Health Psychology


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Jacquelyn L. Resnick  
Professor of Counselor Education

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Patricia H. Miller  
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



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Professor of Communication Processes and  
Disorders

This dissertation was submitted to the Graduate Faculty of the Department of Psychology of the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 1999

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Dean, Graduate School